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15¢

FEATURING

THE DAY OF THE CONQUERORS

A Complete Novel of
The Stone Age
By MANLY WADE
WELLMAN



A THRILLING
PUBLICATION

REVOLT AGAINST LIFE By FREDERIC ARNOLD KUMMER, JR.

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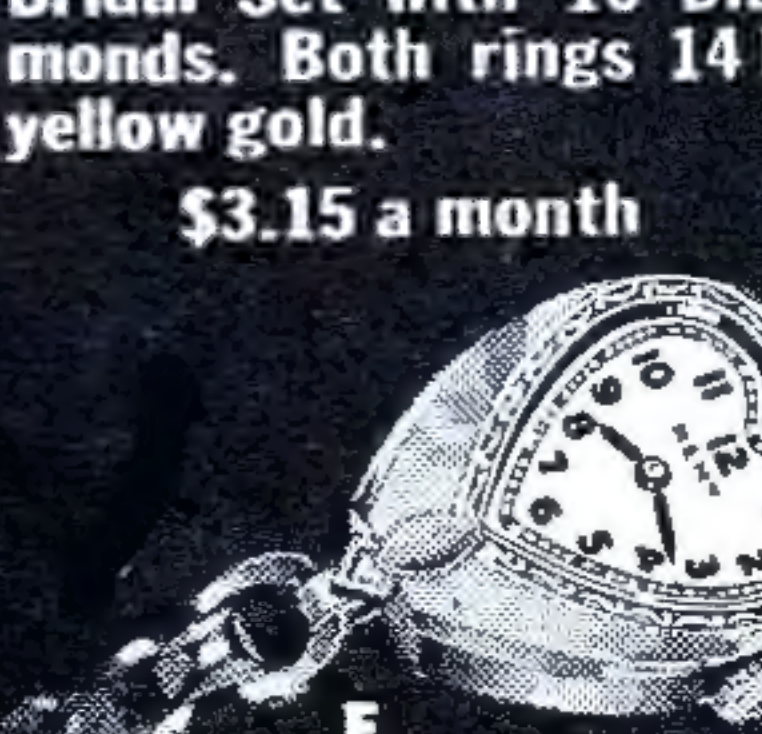
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Vol. XV

No. 1

The Magazine of Prophetic Fiction

January, 1940

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A Story of a Robot

By
F. ORLIN TREMAINE

and many others

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● **ON THE COVER**

The cover painting by Howard V. Brown depicts a dramatic scene from Robert Moore Williams' short story, **THE ETERNAL LIGHT**, which appears on Page 66 of this issue.

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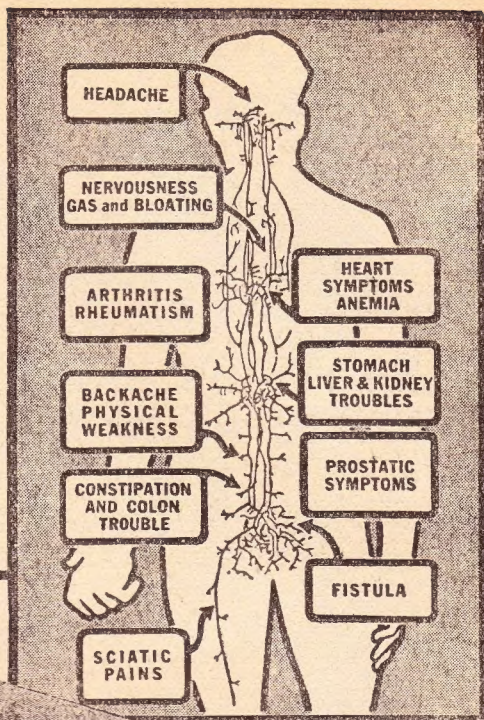
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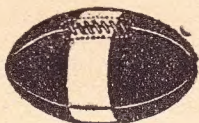
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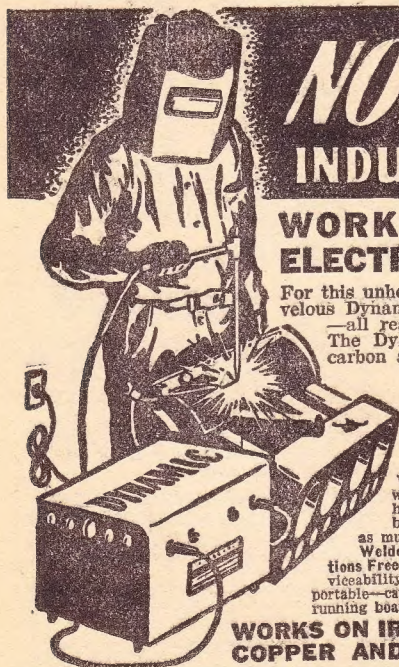
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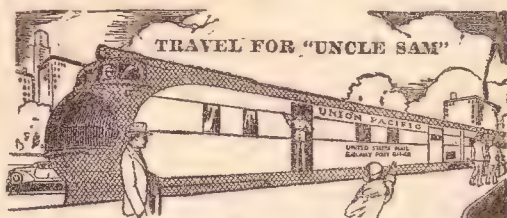
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REVOLT AGAINST LIFE

Death Takes a Holiday When One
Man Unleashes the Forces of Eternity!

By **FREDERIC ARNOLD KUMMER, JR.**

Author of "Signboard of Space," "The Telepathic Tomb," etc.

CHAPTER I

Dreitler's Revelation

THE whole tragic history of earthly immortality is, of course, well known to everyone on this planet. Yet because of my close association with Dr. Hans Dreitler, I, Eric Haywood, am in possession of certain startling and hitherto undisclosed facts which should, I feel, be made public.

To begin with, Dr. Dreitler was my instructor in bio-chemistry at Midwestern. He was a tall, dark-haired, vigorous man of about forty, his steel-

gray eyes brilliant, his square jaw set as though defying the world to contradict him. Nor in his ten years at Midwestern had he seemed to change, to show any signs of advancing age. That alone should have made people think, but even our wildest guesses would have fallen short of the actual fantastic truth.

Upon my graduation Dreitler made me his laboratory assistant. There were others in the class infinitely more brilliant than myself who would have given anything for the position. I suspect Anne, his adopted daughter, had a great deal to do with it. She and I were unofficially engaged.

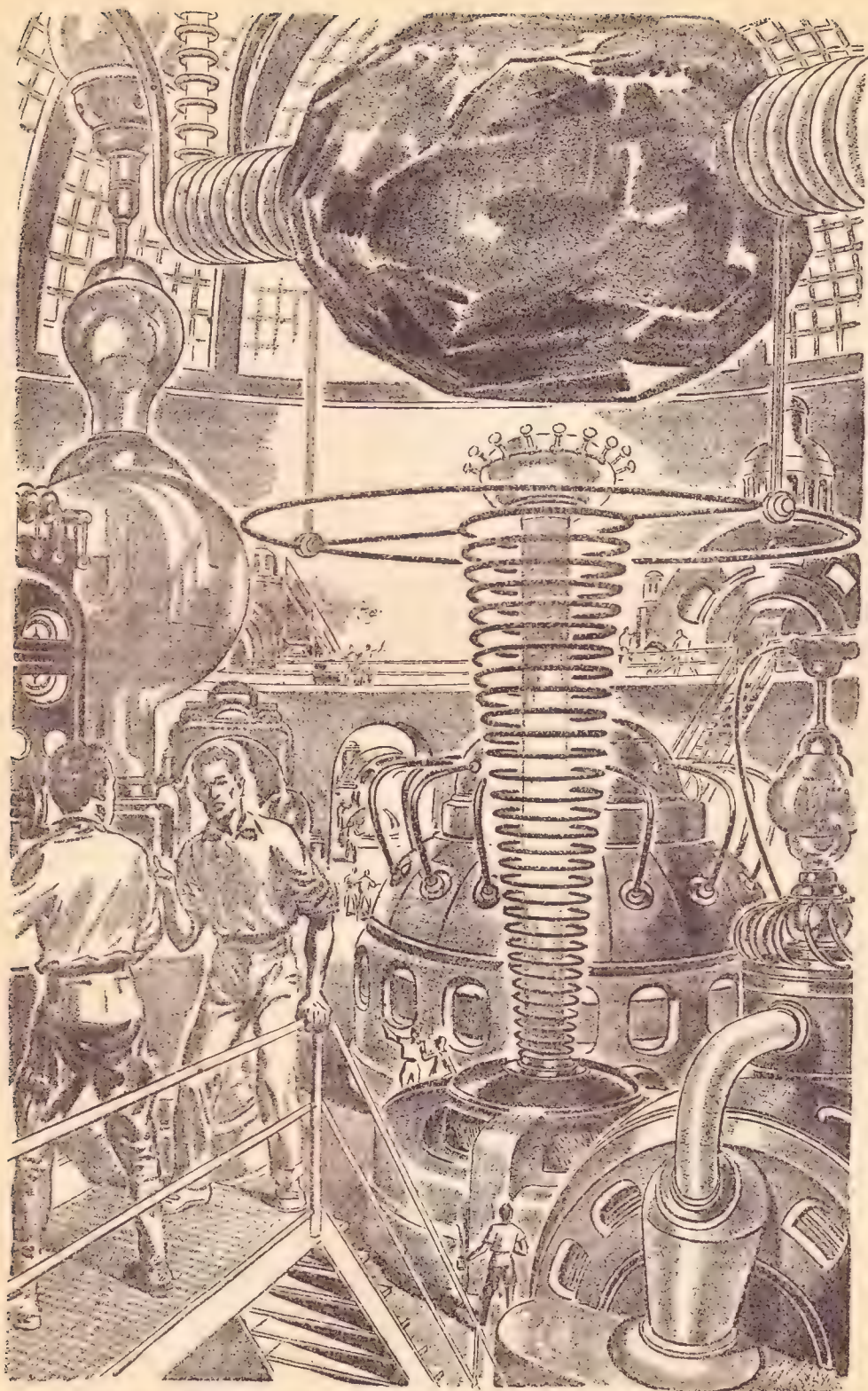
My work was interesting, although along routine lines. I had the run of the entire laboratory, except for a securely locked little cubby-hole adjoining the office, where Dreitler was conducting a series of secret experiments. I remember speculating why every morning, regular as clockwork, he would enter this tiny room, lock the door, and stay there for half an hour. It wasn't like him, somehow.

In our other experiments he would work by fits and starts, erratically, with a complete disregard for routine. Moreover, from what I could see of the interior of the little room as he went in or out, it contained only an old Morris chair, a book-littered desk, and a rather curious tangle of bulbs and wires suspended from the ceiling. Still, all scientists have their eccentricities, and between my work and Anne, I had little time to puzzle over this one.



Eric Haywood

A Novelet of a World Immortal



Like some tremendous, blue-black diamond, the faceted crystal gleamed weirdly

It was only natural that when Dr. Dreitler read a paper at scientific gatherings I was expected to attend. Anne always went, too, more out of loyalty than because of any interest in bio-chemistry. After all, the doctor had been both father and mother to her since childhood and she felt that such little considerations were due him.

The meeting at Stoodly Hall promised to be in no way different from the dozens of others I had attended. Dull, boring events, they were, with incredibly dry papers read by men who were better scientists than lecturers. This evening of February 12, 1994—the most important date in the history of mankind—Dr. Dreitler was to deliver a short talk upon the history and future of Multicellular Protoplasm.

Although Anne and I were, so to speak, members of his own household, he did not give us even a hint of what he had in store. I recall, though, that when I asked him if he wanted me to type his address, he said he would speak extemporaneously from notes. Also, he dressed with more care than was his usual custom and cautioned us not to be late. These things made no impression upon me at the time; but before the evening was over, I realized what they meant.

Stoodly Hall was only half-full that night. Most of Midwestern's faculty turned out, for Dreitler was popular among his colleagues. A group of students also showed up, a few of them genuinely interested, the majority in hopes that their presence would induce Dreitler to look upon them with favor in the forthcoming exams. A dozen professors from other universities, and a smattering of scientific dilettantes made up the rest of the audience.

It was a raw, nasty winter's night outside and the hall was chilly. Anne and I took our places in the front row, settled ourselves for what promised to be a thoroughly dull evening. I paid little attention to the chairman's tedious, colorless address.

It was not until Dr. Dreitler arose, drawing forth a perfunctory spatter of applause, that my attention focused

upon the speaker's platform. Tall and erect, he stood, looking somehow very youthful in the light of the big *radite* arcs.

"Ladies and gentlemen," Dr. Dreitler began, "my remarks this evening will be of a highly informal nature, for reasons which will, I think, become apparent. I merely wish to review briefly several very well known facts. First, in the words of that ancient scientist, Dr. Jaques Loeb, 'Death is not inherent in the individual cell.' The age-old case of Carrel's living fragment of chicken tissue establishes that fact. All living tissue is made up of millions and millions of tiny cells—immortal cells which, if properly nourished, properly cleansed of accumulated toxins generated in the body itself, can live and reproduce forever. Why should not what is true of a small fragment of living matter be true of the whole organism? I came to the conclusion that were all waste products completely eliminated from the human system, life might be prolonged indefinitely!"

A MURMUR of conversation rippled through the hall as Dreitler paused. Perhaps the rest of the audience felt, intangibly, as I did, that something tremendous, something incredible, was about to take place. I glanced at Anne. She was leaning forward, chin in hand, her smoke-gray eyes dim with dreams. Suddenly Dreitler was speaking again.

"Immortality is mankind's fondest wish. His deepest, most fundamental desire. To defy the Grim Reaper! To conquer Death! Alchemists have pored over their retorts, their crucibles, for centuries, hoping to distill the fabled Elixir of Life! Faust sold his immortal soul to the devil for a taste of it! Men like Ponce de Leon have crossed oceans and continents in search of the Fountain of Youth! And today scientists in their laboratories carry on the struggle!

"This task," Dreitler went on, "I found comparatively simple. Merely to keep the cells of our bodies free of poisonous wastes. The blood stream performs this function in early youth but its ability to do so becomes im-

paired with advancing years. It needs assistance, just as the process of healing is assisted by the application of antiseptic to a wound. Gentlemen, I say again, with perfect elimination of the auto-toxins that break down our bodily organs, there is nothing, save fatal accident, to prevent the complex human organism from living forever.

"Unhappily, elimination is *not* complete, and large colloidal groups of toxic matter accumulate, poisoning the cells about which they collect, with resultant cell death. When a sufficient number of cells in any particular organ die, the organ in question breaks down, can no longer perform its functions and the whole human organism collapses. This is the phenomenon we call death.

"In view of these facts, the problem becomes, how to break up such large colloidal deposits into smaller fragments which can be easily carried away by the bloodstream. Such a task might, I felt, be readily accomplished by sound. We know that a bit of fragile glass can be shattered by certain high-pitched notes. We know that Marconi killed rabbits at a short distance through sound. We know that the bacteria in milk are destroyed by notes of super-sonic frequency.

"Why not attempt to break up these larger particles of toxic matter by similar means, shattering them so as to permit of easy removal by the bloodstream! Pursuing this line of thought I began experiments with super-sonic vibrations, in an effort to create a note of such pitch as to disrupt these colloidal groups. On approaching the extremely high frequency necessary for this reaction, however, all common oscillating crystals were shattered to bits.

"As a result, I was faced with the problem of finding some crystalline compound which would withstand the tremendous vibratory note. Without going into a record of all the experiments during the years that followed, let me say that at long last I succeeded in producing a crystal that was able to stand up under such high frequencies.

"Using a hitherto unheard of rate of vibration, I produced super-sonic

notes that had amazing results upon living tissue. Short-lived organisms existed in perfect health for ten, twenty, a hundred times their normal life span! Mice and rats lived to ages which made them veritable Methuselahs, so far as the animal world was concerned.

"Experiments on chimpanzees and apes showed the same results. Degeneration of cell tissues was not only retarded, but absolutely checked! There remained only to try my sound wave upon human beings!"

DR. DREITLER stepped to the edge of the platform, suddenly grave. There was an exultant, triumphant look about him, a fierce glow in his black, dynamic eyes.

"My friends," he said solemnly, "this experiment succeeded! In the year nineteen-forty-four, after a decade of toil, I was able to—"

A roar of laughter, shouts and cat-calls, drowned out the doctor's voice. For a moment I was puzzled, then realized the cause. Dreitler was clearly no more than forty, and therefore could not have been born until years after the date he mentioned. An obvious slip of the tongue.

But Dr. Dreitler stood very still, one hand raised as though pronouncing a benediction. When the tumult had died down somewhat, he recommenced.

"One can hardly blame you for skepticism, even in the face of facts. However, if you will remain quiet long enough for me to submit my proofs, I shall be deeply appreciative. I was born in the year nineteen and four in Germany. In nineteen-forty-four, when I discovered my cell-purifying sound wave, I was forty. Fifty years have passed and I am still forty, in better health than most men of—"

Once more the storm broke. Dignified professors stood on their chairs, hurling questions, rebuttals, counter-arguments. Cries of, "Liar!" "Faker!" "Throw him out!" resounded through the hall. Students in the back of the room began to chant a derisive chorus. The chairman pounded his gavel frantically.

With some difficulty the crowd was

silenced. Dreitler, who had continued to smile tolerantly all the while, began to speak once more.

"The somewhat juvenile attitude of those present makes me doubt the wisdom of giving immortality to the public. However, I suppose adjustments will be worked out in time. I was saying that in nineteen-forty-four I commenced my treatments with the super-sonic vibration. Since then I have not aged beyond the forty years I had attained at that time, although today I am ninety!"

Sensing another outburst, he spoke hastily. "I have with me the proofs! Dr. Walters!"

From his place on the platform Dr. Walters, Dean of Midwestern, stepped forward. In his hand he held a flat tin box.

"Ladies and gentlemen." The Dean's tones were ponderous, rather austere. "I cannot personally vouch for Dr. Dreitler's astounding claims. My presence here is due solely to this—ah—container. Fifty years ago it was placed in the hands of the trustees of this university to be held until such time as a person possessing the key to its lock makes himself known. I am confident that the box has remained unopened since nineteen-forty-four. Dr. Dreitler, you claim to have such a key?"

The doctor nodded, fished a ring of keys from his pocket, handed one to Walters. Very ceremoniously the Dean opened the box, took from it a faded, yellow newspaper clipping. For some moments he studied it. When he at length spoke, his voice wavered excitedly.

"This clipping is from the New York Times of January third, of that year. It states that Dr. Hans Dreitler, the noted German biologist, has that day arrived in New York. And the photograph is identical with the doctor—as he stands before you now!"

When I look back upon that tremendous moment, it is not easy to remember just what happened next. A queer rustling silence swept like a sighing wind over the hall. Dreitler, looking a trifle disappointed, moved once more to the edge of the platform.

"Further proofs—" he began.

And then the cheering broke loose. Frantic, frenzied cheering. An elderly gentleman near me, a professor in one of the eastern colleges, swayed to his feet, gasping.

"My God!" he whispered. "My God! We can all be immortal!" And he gave a high, hysterical laugh.

Standing there in the midst of that wild, excited crowd, my gaze was not on Hans Dreitler, but on Anne. Staring at her rich, mahogany-red hair, her incredibly fair skin, her scarlet slash of a mouth, one thought kept pounding through my mind. Not just a few short years, a lifetime of happiness, but an eternity together, with youth that would remain forever unchanged.

"You and I," I whispered. "Always, Anne."

CHAPTER II

Immortality Riot

I WAS awakened the following morning by a loud pounding on my apartment door. Old Mr. Flane, who roomed across the hall from me, had heard the news on the early broadcast and sought details. Before I could get rid of him, others in the boarding house began to crowd the hallway, firing a barrage of questions. To be free of their eager demands, I bolted a hasty breakfast and headed for Dreitler's a half-hour earlier than usual.

The streets outside seethed with excitement. Immortality was on everyone's lips. Robot newsboys on the corners repeated the word, "Extra!" in harsh metallic voices. Passing cars, their radios blaring above the almost inaudible purr of their atomic motors, gave fragmentary snatches of the news. "—conclusively proven." "—farewell to death."

I stepped aboard a magnetic lift, got off at the third level, where a monorail express was waiting.

Dr. Dreitler's house was an old-fashioned glass brick affair on the edge of the university grounds. As I

walked toward it from the monorail station, I noticed that it was surrounded by a milling, jostling crowd. A rather pathetic crowd, apart from the curiosity seekers and loafers. Old people, somehow believing that they were going to recapture lost youth, the halt, the lame, and the blind—all waiting with pathetic eagerness for some miracle that might restore them. With sad patient faith they stood about as though the little house were a second Lourdes.

I forced my way through the crowd, rang the doorbell. The door snapped angrily open.

"Sorry, but I can't—" Dreitler broke off, recognizing me. "Oh, it's you, Eric. Come on in."

"Hi, there, darling!" Anne, very lovely in one of those green, form-fitting cellosilk dresses which were all the rage in nineteen ninety-four, came forward to greet me. "All set for ten thousand years of marital bliss? Just think of our ten thousandth anniversary with a few million descendants dropping by to wish us luck!"

"Anne"—Dreitler turned to her gravely—"this is no matter for joking. It is the beginning of a new era. An economic revolution that I alone have created. The world is at my feet!"

I watched Dreitler closely. A peculiar change had come over him since the night before. He seemed no longer a humble scientist, devoting his life to the welfare of mankind. There was about him a new aggressiveness, a dominant grasping lust for power.

"You plan to give the secret of your super-sonic vibration to the world?" I asked. "Those pathetic cripples outside—"

"The world!" Dreitler's bushy brows met in a deep frown. "You think I will give this priceless gift to millions of stupid peasants, uneducated morons? Everlasting life is only for the select, the great intellectuals, men of my mental plane! An aristocracy of brains! The outstanding men and women of every generation given the supreme reward of immortality! No longer shall I be alone, watching my friends become senile, die! We, the immortals, shall live through the ages!"



"I shall be here as I am today, immortal, deathless, eternal . . . !"

"But—but—" I shook my head wearily. "It's impossible! Look here, suppose we say that Novak the astronomer was nominated for immortality!"

"He will be, of course," Dreitler said impatiently. "What of it?"

"All right! Novak's still a young man and married. Rather in love with his wife, so they say. I don't think he'll want to remain youthful, vigorous, while she grows old, dies. Hardly the ideal married life, a young man linked to a withered, tottering crone!"

DREITLER made an impatient gesture.

"Wives," he began. "Why I could include his wife, and—"

"How about Novak's three children? He wouldn't care to see them aged, doddering, while he remained forever young. Two of the children are girls. Include them, and you'll have to include their future husbands. Then there's Novak's mother and his wife's sister—"

"You are a fool!" Dreitler's voice rose to a shout. "What do wives and children matter? We shall have thousands of wives in the ages to come! An hour ago I announced to the universal newscast companies that immortality would be reserved for a few! The decision stands!"

"Anne!" I glanced at her, standing slim and erect by her foster-father. "Can't you make him understand? The public won't stand for this! There'll be trouble—"

It was at this instant we heard it, a low, ominous roar in the street outside, growing momentarily louder and louder. Hoarse shouts, furious cries, and the fierce hiss of heat guns.

Suddenly the door burst open and a wild-eyed policeman, his uniform torn, his face bloody, staggered into the room.

"Get out of here!" he muttered. "Quick! We—we can't hold 'em!"

Before we could answer he was gone, running as though the devil were after him. I sprang forward, peered through the doorway.

Like a vast, irresistible tidal wave the crowd was rolling along the street, sweeping before it a fringe of blue-uniformed policemen. The officers were emptying their guns into the mob, cutting wide swaths in its closely-packed ranks. Scores of blackened bodies slid to the ground. Smoke and the sickening stench of charred flesh hung like a pall in the air. Yet in spite of this slaughter, the maddened mob pushed on relentlessly.

All at once the fire from the heat guns ceased. Ammunition exhausted, the policemen took to their heels, scattering like autumn leaves before a gale. A deep-throated, triumphant roar went up from the densely packed streets. Its progress unimpeded, the crowd rushed swiftly forward.

Every class, every type, seemed represented in its ranks. Here, a gray-clad rocket pilot, his face contorted with mob fury; here a white-aproned grocery clerk, one scorched arm dangling limply; and here a brawny mechanic, wielding a heavy sledge. As they drew near, I could distinguish their savage cries.

"Down with Dreitler! Eternal life

for everyone! No aristocracy of immortals! We want everlasting life!"

"Quick!" I spun about, faced Anne and Dreitler. "The back door! Run!"

Even as I spoke, the surging mass of humanity encircled the house, cutting off all escape. The little glass-brick cottage was like a tiny island in that sea of furious people.

"Surrounded!" Dreitler exclaimed harshly. "They dare threaten me! The swine!"

"Speak to them!" I exclaimed. "Promise them anything! Anything!"

THE doctor's square jaw thrust forward grimly. Opening the door, he stepped onto the porch. As he appeared, a sudden hush fell over the mob.

"What do you want?" he cried, his deep voice echoing ominously across the narrow street.

"You know what we want!" a small ratty man shrilled. "Eternal life for the masses! We'll have no tyranny of select immortals ruling the world! We won't let you condemn us to death!"

"Immortality for such as you?" Dreitler laughed scornfully. "You're mad! Only superior intellects—"

The rest of his words were drowned out by an enraged roar from the mob. Dreitler had barely time to leap back across the threshold, slam and lock the door, before the crowd reached it.

"Great God, man!" I cried, seizing his arm. "Why did you have to antagonize them? That door won't hold a minute! And with Anne here—" I glanced at her, pale, wide-eyed, standing by the foot of the escalator. "Go upstairs! Stay there until they leave!"

Anne remained motionless, chin high. She wasn't the type to hide while we faced that mob. Nor did we have any time to argue with her; already the door was beginning to give way.

With a splintering crash it burst open. Acting instinctively, I snatched up a heavy chair, swung it at the two men in the entrance. A crashing thud, a weak moan, and they lay limp and bleeding upon the floor. Instantly two others pushed their way into the

house and again I swung the stout metal chair. Two more men fell, one groaning over a broken arm, the other clutching a torn and battered face. Then Dreitler was beside me, wielding a heavy cane, his black eyes glittering with desperation and fury.

The next five minutes were for me a strange, unreal dream. A dream in which I automatically swung the heavy chair at queer, masklike faces. Even now I can shut my eyes and see them staring at me. Savage, twisted faces, wild with rage; white, frightened faces, pushed on by those behind; pathetic, bewildered faces, seemingly puzzled by their very presence there.

I had no animosity toward these poor people; my one thought was to protect Anne.

We were becoming exhausted now, forced to retreat slowly against the overwhelming odds. And as we moved from the doorway, more and more of them poured into the hall. We found ourselves backed against the wall, Anne slightly behind the doctor and myself.

Suddenly from somewhere in the crowd a heavy iron door-stop came hurtling toward us.

Before I had time to dodge it, it struck my head a glancing blow, stunning me. The chair fell from my

hands, and I slumped to one knee. At that moment the cane was wrenched from Dreitler's hands. Unarmed, helpless, he stood there with his back to the wall, facing that circle of savage, furious faces.

"Dr. Dreitler!" A huge, bare-armed man carrying a butcher's steel stepped forward. "Unless you promise to give eternal life to the people, you shall lose your own! Swear to give eternal life to the people!"

With a curious change of manner, Dreitler became suave, urbane.


"Surely, sir," he smiled. "You have my word!"

"Good!" The man eyed him suspiciously. "And just remember, if you try to doublecross us, we'll get you. Sooner or later! We'll follow you—"

SUDDEN howls rose from the mob outside. They began to scatter. Through the doorway we could see light riot tanks, their pain projectors sweeping in arcs of blue radiance. The nerves of anyone touched by that light would be racked with excruciating pain, although left with no lasting effects. As the little beetlelike tanks advanced, the crowd broke, took to its heels in an effort to escape the blue beams.

Those who stood in the hallway
[Turn Page]

THE GIRL WHO PUNISHED HERSELF



BETTY: I don't know which is worse . . . constipation or the remedy!

SALLY: You're silly to punish yourself that way. Why don't you try Ex-Lax?



BETTY: Ex-Lax? You expect that to work for me . . . a little chocolated tablet?

SALLY: Don't let its taste deceive you. Ex-Lax is thorough and effective.

LATER



BETTY: No more strong, bad-tasting laxatives for me! Ex-Lax fixed me up fine!

SALLY: What did I tell you! We've used Ex-Lax in our family for over 30 years.

The action of Ex-Lax is thorough, yet *gentle*! No shock. No strain. No weakening after-effects. Just an easy, comfortable bowel movement that brings blessed relief. Try Ex-Lax the next time you need a laxative. It's good for every member of the family.

10¢ and 25¢



of the house, facing us, began to edge toward the door. In another moment we were alone in the room except for a dozen limp, bloody figures.

"Thank God!" Anne whispered faintly. "The riot police."

"If your father had promised them immortality in the first place," I snapped, "this would not have happened. He wouldn't have necessarily had to live up to it, any more than he'll live up to the promise he just made."

DREITLER straightened his tie, turned to me.

His sleek, satisfied smile seemed out of place on such a bruised, battered countenance.

"You are mistaken," he said sardonically. "I intend to keep that promise, to give immortality to the world!"

For a long moment I stared at him, aghast.

Kaleidoscopic pictures flashed through my mind, pictures of the chaos I felt must follow the giving of Dreitler's secret to the world.

"Yes," the doctor went on complacently, "I shall let them have immortality. But I will keep the secret of the machines to myself!"

"No!" I cried. "You can't realize the consequences! This thing is dynamite! Don't you see—"

"You would have him deny humanity its greatest desire?" Anne's voice was icy.

She took her foster-father's arm, stared at me scornfully. "Or perhaps you'd like Dad to refuse, and be killed by the mob!"

"So that's your answer?" I demanded. "You'll stay here, help him fasten this curse upon the world? Allow mankind to destroy itself?"

"I don't understand you," Anne said coldly. "It is a great discovery, for the good of humanity. I think you had better leave!"

Smiling mockingly, Dreitler waved me toward the door. As I stumbled through it I could hear his voice, harsh with triumph.

"Yes, I alone shall know the secret! They will be dependent upon me! With the power of life and death in my hands, I shall control the destiny of the world!"

CHAPTER III

Terrible Edict

WHENEVER mankind sets out to accomplish something, it usually does so with remarkable thoroughness. So it was with immortality. After that terrible day at Dr. Dreitler's home, a group of picked guards was appointed to watch over him, see that he was not disturbed. The resources of the entire nation were placed at his disposal. A large tract of land near Chicago was given him, and a tremendous factory was erected almost over night.

Congress, discarding all other debate to place immortality first on its agenda, voted him unlimited credit to speed the manufacture of his Life units. Two factors, however, Dreitler guarded jealously. One, the composition of the oscillating crystals that produced the super-sonic note, and the other, the rate of vibration.

A small box in each set contained the vibrating crystal, so constructed as to explode if tampered with. In a securely locked room of the factory Dreitler built these tiny boxes, using robots and automatic machinery to turn them out in quantity.

Within a few months the entire nation was equipped with Life Stations, one large dispensary for each community. In these Dreitler's magic boxes were placed. And with the United States thoroughly supplied, Dreitler began to manufacture Life sets for the other nations. A great, world-wide war on death, it became, with everyone working or contributing in the struggle.

During those early days it was as though some joyous holiday had been declared. People seemed proud and happy over the prospect of eternal life. Tremendous changes swept the world. The terrible Asiatic War ceased abruptly, for mankind lost all desire to waste its immortality in futile fighting.

International good will spread quickly, all races, all creeds, united in one vast endeavor. A fool's paradise,

it was, with everyone speaking of Utopia and the millennium. The few sane voices of reason were drowned out in the universal hymn of thanksgiving.

Perhaps the strangest thing was the attitude of the people. Life insurance companies failed as everyone cashed in their policies, disrupting the financial structure of the entire world. Smaller businesses such as undertakers, casket makers, patent medicine manufacturers, were wiped out, and with them doctors and nurses.

Yet in spite of this, no one seemed to care. What did it matter so long as they were immortal? Even persons in these ruined industries were happy to exchange their jobs and wealth for everlasting life. The church alone fought against the new order of things, but religion, robbed of its promises of heaven, its threats of damnation, quickly became a negligible factor. Dreitler, offering eternal life, was the godhead of mankind.

In those days I was regarded as a crank, eccentric to the verge of insanity. Anyone who spoke against immortality was considered mad. Without a job, bitter over my quarrel with Anne, I grew taciturn, morbid. At first I determined not to take the Dreitler treatment; but the hope of eventual reconciliation with Anne drove me to it. What chance of such a reconciliation if I allowed myself to grow old while she remained eternally youthful? Besides, I wished to live, to carry on the struggle against immortality until I had destroyed it.

THE Life Station in my neighborhood was an old apartment house, hastily converted to serve as a center for the Dreitler treatments. Heavily armed guards, men in Dreitler's employ, were in constant attendance to prevent any tampering with the machines. The building was divided into numerous little cubicles, each with a Life unit in the ceiling. By presenting a time card, one was admitted to a cubicle, told to lie still upon a table until a gong announced that the time was up. As you left, another shift entered.

The sonic waves themselves were

rather disappointing to those who had expected something bizarre. They were inaudible to the human ear and attended by no spectacular phenomena. The effect, however, while not immediate, was quite remarkable. It was at once soothing, restful, and yet as stimulating as a cold shower.

With bodily poisons all neutralized, one felt as though a terrific jolt of concentrated energy had been injected into one's body. Old people experienced a sensation of youth and vitality; sick persons were, in many cases, cured; customary nuisances such as headaches, fatigue, and colds, were thrown into the limbo of forgotten things.

Old age was checked; everyone remained at the same point of life as when the treatments began. More exhilarating than liquor, more soothing than dope—and more dangerous to humanity than either, as we were soon to find out. Meanwhile a wild delirium of joy still gripped the world. Man, they said, was on a plane of equality with the gods.

The first year after the coming of immortality found Dreitler ruling the earth. The oscillating crystals of his super-sonic vibrator wore out in approximately ten months and mankind found itself dependent upon him for their very lives.

Attempts had been made, of course, to steal the crystals from the Life Stations, learn the secret of their composition, their rate of vibration. Several daring men had got by the guards, tried to remove the little "sound boxes." In each instance, tampering with the projector units had resulted in violent explosions, destroying not only the intruder, but the machine as well.

Thus, with the power of life and death, Dreitler ruled. Not openly, of course—he permitted kings, dictators, and presidents to adjust local affairs. But he formed the World Scientific Advisory Council, of which he was absolute director, and the W. S. A. C. issued its "advice" to the various countries, advice which no one dared to disregard.

I was not surprised when one of its first decrees was to place a price upon

my head as a dangerous agitator against the new order of things. Warned in advance by a friend with high governmental connections, I was able to escape in a rocket plane and land surreptitiously in England.

Here, under an assumed name, I managed to obtain work in a chemical plant, resolving to wait until the hunt for me died down and the time was more auspicious to put into effect the plan I had in mind—a plan which the world was not yet ready to understand.

The five years that followed brought the first distant rumblings of disaster. Food prices shot upward and unemployment increased with the rapidly mounting population. Higher taxes and bread riots, and then the first of Dreitler's harsh measures—that in no family could husband and wife both hold jobs. And business, still feeling the effect of the collapse of the life insurance companies, seemed to go ever deeper into the red.

AT the end of fifty years the world was in a pitiable state. Teeming millions were fighting for homes, for food. South America, Australia, Siberia, the Pacific Islands, all the sparsely populated spots in the world, were filled with wretched little farms, tiny plots of ground yielding barely enough to feed the ragged, primitive farmers. People in cities, less sure of food, grew gardens in yards, on rooftops, while the public parks were cleared to be used as farm land.

It was at this time that I left England, began the travels which for the next century and a half were to make me a homeless wanderer. To France, to Germany, to Spain, I went, secretly organizing groups against immortality. Begging food and Life treatments from sympathetic persons wherever I went, I laid the foundations of the Mortalist movement, gaining followers, giving private lectures, dodging Dreitler's spies. A year in Norway, six months in Poland, two years in Italy working with the church groups there.

And always it was to youth I appealed, youth who had found no place for themselves, youth who had no

dead man's shoes into which to step, and were forced to exist on food rations, charity or to toil endlessly at some petty job without hope of advancement. With every position and job of importance held by those who could not die, the outlook for youth was heart-rending. But eternally secure oldsters held youth down with the result that a rising tide of young people, ever-growing, ever-young, battered tumultuously against the barrier of age.

After a hundred years of immortality, compulsory birth control was put into effect by the W. S. A. C. to limit the number of children in a family. In spite of the severe fines for having a child beyond the allotment, however, "bootleg" babies were far greater in number than the deaths every year from accidents. Murder and violence increased among the restless, starving billions. Only the few men who had reached the pinnacle of success and were assured of luxury until the end of time knew real happiness.

Going southward, I roamed Africa, speaking through interpreters to savage blacks, to learned Arab teachers. In Turkey, in Russia, dissatisfied men and women banded together in secret societies, awaiting the day when some great discovery might enable them to overthrow Dreitler's despotic control. Yet in comparison to the tremendous population of the globe, my followers were only a handful.

At the beginning of the second century of the new era, Terra had reached its limit. Mountains, deserts, wastelands, were covered with wandering tribes who eked a miserable existence from the arid soil. On the frozen polar caps wandering bands of hunters roamed the ice floes. Lakes, rivers, oceans, were covered with makeshift boats from which a floating population combed the waters for fish.

Civilization was breaking down, yet in every desert tribe, every polar colony, every boat, there was a super-sonic Dreitler Life Set, powered by the sun, the wind, the waves. Mankind clung to its folly, since no one was willing to sacrifice his personal immortality for the benefit of others who refused to do so.

BY this time the Mortalist movement had grown to large proportions, although still forced to meet secretly because of Dreitler's bitter war against it. The arms, the war planes, the munitions plants of the entire world were in his hands and an uprising would have meant only disaster. Nor would we, the Mortalists, refuse to take his treatments, since by doing so, dying, we would only make his position and that of his old wealthy followers more secure.

I spent whatever time I had in the study of oscillating crystals, hoping to discover the secret of the Dreitler composition, and thereby a means of nullifying the effect it produced. In all my experiments, however, I found that ordinary crystalline materials, vibrating at a rate approaching that which Dreitler used, were shattered to bits. One great discovery I made, although it seemed ironic at the time. I learned how to transmit the super-sonic waves by radio. And I kept the secret to myself.

I was in Australia, staying with a family by the name of Johnson when Dreitler—he had dropped the formality of the W. A. S. C.—issued his final and most terrible decree. This family, staunch Mortalist sympathizers, were typical of the era. At meal time the table would be crowded with young handsome men and women, very difficult to tell apart since they were all of the same family.

Mr. and Mrs. Johnson sat at opposite ends of the long table, not more than twenty-five in appearance although approaching two hundred in actual years. And the others, all of

about the same outward age, a confusion of children, grandchildren, great uncles, nieces.

Here a lean bronzed young man would turn to a pretty blonde girl and say, "Grandmother, please pass the butterine." Or, perhaps a slim, pink-cheeked young thing of about ninety would scold a grandniece who might readily have been her twin sister. Even Mr. and Mrs. Johnson had difficulty in telling their descendants apart; the house was more like an institution than a home.

Nor was theirs a particularly happy family. The younger women wanted children, homes of their own, but overpopulation and the housing shortage made that impossible. The men, most of whom were without jobs, wanted adventure, excitement, the thrill of building a career. Yet these things were denied them. Even those who had jobs were unable to advance, since the men above them, neither dying nor retiring, left no vacancies. Like the rest of the world they were gripped in the frozen, unchanging pattern of everlasting life.

We had just finished dinner this evening and were seated before the battered old television set when the ballet that was being given faded from the screen and an announcer's pale face appeared.

"Ladies and gentlemen!" he said. "Dr. Dreitler had just passed a decree making child-bearing punishable by death! A man and woman bringing new life into this overcrowded world will be faced by the choice of either sacrificing the child or one of them—

[Turn Page]



selves! Dr. Dreidler wishes to make known that he regrets taking such drastic measures, but in the interests of humanity as a whole there is no alternative!"

There was a shocked silence in the big room. I pushed back my chair, stood up.

"Find out when the next rocket plane leaves for Chicago," I said. "I'm going to the United States at once!"

CHAPTER IV

The Great Crystal

I HAD not been in the United States for two hundred years when I landed at the Chicago airport. The city seemed strangely changed in spite of its enormous size.

An air of decay, of musty age, hung over the crumbling buildings. Rutted streets had been allowed to remain in disrepair, dirt and rubble choked the sidewalks. The old urge for advancement had disappeared, the spirit of youth and progress was dead.

Armored trucks rumbled through the streets, bringing food to the heavily guarded distributing centers. Cadaverous men, pale in the sunlight that streamed through the glass highways of the levels above, roamed aimlessly about with nothing to do. They, I knew, would gladly have exchanged this eternity of gray, maddening monotony for a normal life span of homes, happiness, and children. Filled with sudden sorrow, I walked on.

Dusk was just fading into night as I drew near the great mass of gray granite buildings on the outskirts of the city. Like a huge man-made mountain they towered against bloody sunset, dark, menacing. More of a fortress than a factory, with armed guards pacing the walls, and glaring rocket planes circling like vultures above.

Somewhere inside, I knew, was the forbidden laboratory, the secret of the super-sonic vibrations. Within those grim walls, also, was Dreidler, the ruler of mankind, and perhaps Anne.

Sudden nostalgic memories choked

me. Anne of the deep red hair, the smoke-gray eyes! But she, no doubt, had married long ago. Even if she had not, I could never expect her to remember me after two centuries! Smiling crookedly at my own fancies, I crept nearer to the group of massive buildings.

The granite wall, thrusting sheer upward for a hundred feet, loomed before me. Impossible even to think of scaling such a barrier. Yet unless I obtained the secret of the oscillating crystals, there was no hope of overthrowing immortality. To attempt to destroy the machines by force would only result in slaughter at the hands of Dreidler's heavily armed forces. And to refuse to take the treatments would not destroy Dreidler and his group of old, wealthy followers. Drawing a deep breath, I started to climb the wall.

The next ten minutes were a mad delirium of toil. In spite of the heavy rubber suction cups on my hands and feet, I found it difficult to get a grip on the unpolished stone. Moreover, progress was maddeningly slow. The suction cups had to be worked loose gradually in order to make no noise which might attract the attention of the guards. Like a human fly I crawled up the wall, muscles aching, bathed in sweat, and dizzy from the sight of the sheer drop below.

The footsteps of sentinels above froze me to breathless immobility. Only by a miracle did the patrols, passing the base of the wall below, neglect to look upward and see me flattened against the gray stone.

At last I reached the top, lay there gasping for breath. Then, hearing the footfalls of an approaching guard, I slithered over and commenced to descend the inner face of the wall. This was comparatively easy since the roof of a building lay only a few feet beneath. Dropping lightly to it, I ran swiftly toward the huge central structure. Here, luck was with me. From the roof I was able to reach the sill of an open window, draw myself up and thus enter the Dreidler factory.

THE room in which I found myself was large, sumptuously furnished.

Apparently I had stumbled into the living quarters. Somewhere in this building, if my information was correct, lay the secret laboratory in which Dreitler made the crystals. Moving softly through the shadowy darkness, I made my way toward the door.

At that moment crisp footsteps sounded in the hall outside. A rattle of the knob and the door swung slowly open. Crouching low, I drew my heat gun, aimed it at the indistinct figure on the threshold. My finger was just tightening on the trigger when a switch snapped and the room was brilliant in the light of *radite* lamps.

"Anne!" I whispered hoarsely.

For a moment she stood staring at me, her hair glowing like coiled bronze, her eyes clouded with doubt.

"Eric!" she whispered. "Is—is it really you?"

Instantly she was in my arms for a sweet but poignant embrace.

"Then you do remember?" I said unsteadily. "After all these years?"

"Remember?" Tears hung like bright diamonds on her long lashes. "If you only knew how I've tried to find you! Oh, Eric, you were so right and I was so wrong! I know now why you fought against my father's invention! I've seen religion die out, seen women denied their most sacred mission.

"Famine, overcrowding, squalor! Men doomed to an eternity of endless routine, with no chance of advancement! No future, no children, no hope! Oh, if only there were some way to overthrow this dreadful curse!"

"There is a way," I said slowly. "To destroy all the Life machines! Not by force, for that is impossible with the Stations so well guarded, but by a scientific method I have in mind! That's why I'm here tonight. If I can get a sample of the crystalline matter your father uses, learn the rate of vibration to which it is tuned, I believe I can end immortality. Tell me where his laboratory is and I—"

"No!" Anne gripped my arm tightly. "You—you can't! My father is in his laboratory now. He's working on plans for a larger Life unit covering

a wider field. It is impossible for you to pass the guards. Let me get the information. Tomorrow, when he's not working, I can go to the laboratory, obtain one of the crystals, find out the rate of vibration!"

For a moment I studied her, turning the matter over in my mind. Was this a trap, a trick to save her foster-father? And yet the sincerity of her voice, her expression, dispelled all shadow of doubt.

"Here!" I wrote a few words upon a scrap of paper. "This is the Chicago meeting place of the Mortalists. When you get the information, come to me there."

Anne nodded, slipped the paper into her pocket.

"Now you must leave," she said. "If my father were to find you here—Come!"

With Anne at my side there was no difficulty in passing the sentries. A word from her opened a small side gate in the outer wall. As the guard turned to draw the heavy bolts, I felt soft lips brush my cheek.

"Tomorrow or the next day," she whispered. "Goody-by!"

A moment later I was walking toward the city, my brain in a tumult.

I FOUND the Mortalist meeting place in Chicago was an old abandoned air-raid shelter, a relic of the Fascist wars. A huge cavern, capable of holding over a thousand persons, it lay beneath a tumble-down row of houses on Dearborn Street. Upon investigation of my credentials I was admitted with warm greetings.

Throughout the remainder of the night and the next day I paced the floor, tortured by a thousand doubts. Was Anne sincere, or had she offered to steal the crystal merely to get rid of me? And, if sincere, would she be able to accomplish her mission safely, without her foster-father's knowledge? Like the beating of a tom-tom these thoughts pounded ceaselessly through my brain.

It was near sunset when Hensic, leader of the Chicago group, came down to the great underground cavern.

"Someone to see you, Mr. Hay-

wood," he announced. "A woman."

I glanced up. In the doorway behind Hensic stood Anne.

"Eric!" she cried, running toward me. "Here! The crystal! And copies of my father's notes! He does not yet suspect—"

I thrust the package into my pocket, held her close.

"Darling!" I whispered. "You have given hope back to mankind. Now you must go, at once, before your absence is noticed! In another month—"

The weeks that followed were an unending cycle of toil. Rare minerals to be somehow procured, tools to be made, work, killing, ceaseless work, to be done by the half-starved young people who followed our cause. For I now knew the secret of Dreitler's crystal—a synthetic silicon quartz, fused in an electric furnace.

Under my supervision a vast machine began to take shape, filling almost the entire cavern. Huge alternating dynamos, great glass tubes, gleaming spark coils, all laboriously made by hand. Radio equipment to transmit the super-sonic notes to all corners of the globe, there to be amplified in carrying out my purpose. Foreign groups, now furnished with plans for the construction of these amplifying units, did their share of the work. Through a gray blur of nights and days we toiled, hollow-eyed, soot-smeared specters, dwarfed by the mighty machine we were building.

The construction of the great oscillating crystal was left solely to me. Electric-furnace siliconite, bought in small quantities to avoid suspicion, was smuggled into the cavern. Feldspar, diamond-hard carbonite, various salts and mineral compounds, were begged, borrowed, or stolen. At last the faceted crystal was completed and placed in circuit. Like some tremendous, blue-black diamond, it gleamed in a weird, fantastic setting. There remained only to tap the city's power lines, connect them with our dynamos, and we would be ready.

On the third of August the last connection was completed. I stood by the control board, eying the towering mass of apparatus, mentally checking

my calculations for the thousandth time. There must be no failure, no error, however slight, if our efforts were to meet with success. Hensic, worn by toil and worry to a gray shadow, touched my arm.

"How much more time?" he asked.

I glanced at my watch. "Two hours. The foreign groups are all synchronized on Chicago time."

"I—I hope we're right." Hensic glanced fearfully up at the huge machine. "It may be that the Dreitler discovery stands for progress, that by destroying it, we will interfere with the destiny of the world."

"No!" I shook my head determinedly. "Immortality has halted progress, crowding the world with static people. Evolution has ceased! And without new life, evolution, the progress, the advance of mankind is at a standstill! For the future of the race, eternal life must go! When I pull this lever—"

A PATTERN of footsteps interrupted me. One of the workers came toward us, carrying a letter in his hand.

"This was left for you just now, Mr. Haywood," he announced. "The messenger said it was very important."

I ripped open the envelope, read the letter inside.

Eric, dear: Father has found out. Please come at once. The side entrance will be open. Anne.

Crumpling the note into my pocket, I whirled about, faced Hensic.

"I'm going to Dreitler's place! If I'm not back by midnight, you have only to pull this lever! Then round up as many men as possible, and come to the factory!"

A half-hour's frantic running found me once more within the shadow of those gray, grim walls. Circling them, I reached the small side door, threw my weight upon it. Unbarred, it swung open. I stepped through, was about to head for the big central building when the gloom around me was peopled with indistinct figures.

"Don't move!" a harsh voice warned.

A *radite* torch snapped on. In its

light I could see a dozen of Dreitler's guards, their heat-guns drawn. My arms were quickly bound.

"Follow me!" the leader snapped.

Without a word I obeyed; resistance against such numbers would have been futile. One thought alone occupied my mind. A trap! And Anne had led me into it! Anne whom I had trusted, loved! And the formula for the crystal—was that also false, like her letter? Was the great machine we had built to be a failure? Dully I plodded after my captors, sick at heart.

Upward through the factory we went, and into the magnificent halls, the richly carpeted corridors of the higher levels. Before a massive steel door the guards halted, their leader standing in front of an oval television view-plate. The sight of his face was apparently reassuring to those within, for the door swung open.

"Enter!" The guards prodded me forward with their guns.

I stepped into a small, metal-lined cabinet, heard the heavy door clang shut behind me. A moment later an inner door opened and I found myself facing a large, well lighted room, a laboratory of some sort to judge by the masses of machinery, the rubber-fingered robots standing motionless by the work bench.

"Ah! Come in!" Dreitler, smiling with deep irony, motioned me forward. "You will join Anne as my guest! This is indeed a momentous occasion! For two centuries my agents have been trying to locate you!"

I walked into the room. At one end of it, her hands bound, stood Anne.

"Eric!" she cried. "Oh, Eric, I—I couldn't help it! I was writing you a note, saying that all was well and to go ahead, when he surprised me. He wrote that other note, got you to come here—"

I GLANCED up at the clock on the laboratory wall. Ten minutes to twelve! If I could only keep Dreitler occupied until midnight.

"You will pardon me while I make some adjustments on my new Life unit," Dreitler said. "Quite an im-

provement over the old ones. It has a far wider range, due to this immense crystal."

He pointed proudly to a blue, gleaming object about a foot square, vibrating under its alternating electrical charge. He called it large, but the crystal was tiny compared to the one I had just built.

For a few minutes Dreitler made adjustments on the set, then glanced up, grinning.

"You two wish to marry," he announced. "I will arrange it. A June wedding—*forty years from now!* You, Anne, shall be kept young and lovely, but our friend here, hating immortality as he does, shall not be allowed to continue the treatments. A charming couple you'll make, with the bridegroom a tottering graybeard and the bride a tender twenty!"

"Forty years from now," I said, and laughed, "you will be only an unpleasant memory!"

"You're mad!" Dreitler cried scornfully. "I shall be here as I am today! Immortal, deathless, eternal!"

"Listen!" I leaned forward and spoke each word slowly. "What makes your Life units destroy the colloidal particles of poisonous waste within the human body?"

"Sound. A super-sonic vibration of given pitch." Dreitler frowned. "Why?"

"Suppose, Doctor," I went on, "a larger, more powerful oscillator were constructed. An oscillator whose range, by means of radio, included the entire earth, and whose crystal vibrated with a super-sonic note at proper variance with that of your Life units, creating harmonic beats within the crystals themselves?"

"It would destroy them, just as my Life vibration destroys the colloidal particles." Dreitler's voice was suddenly hoarse. "But it's impossible! No one but me knows the secret of the crystals!"

"You're wrong!" Anne's voice rang with triumph. "Eric knows! I took your notes, gave them to him!"

"You—you have betrayed my secret!" Dreitler's eyes glowed with a wild, insane light. He glanced up at the big crystal, then turned to us,

laughing harshly. "What does it matter? Haywood shall not escape. Your followers cannot enter here to harm me! They would be slaughtered! And as for you—" From his desk he snatched a heavy heat-gun.

"You two who have tried to overthrow me shall die! Your Mortalists, forbidden the treatments, will also perish! And I, Hans Dreitler, shall go on through eternity!" He raised the gun, pointed it at Anne and myself. "I shall live forever, all-powerful, deathless—"

AND then it happened. A wave of invisible force seemed to shake the building, hurling Anne and me to the floor. Dreitler staggered, reeled toward the new Life unit, his face contorted with rage. The big crystal, a few inches above his head, shuddered for an instant, throbbing like a living

thing. All at once, with a loud report, it burst into a thousand fragments!

Dreitler, his head torn to a bloody pulp by the flying shards of crystal, slumped lifeless to the floor.

Staggering to my feet, I crossed the laboratory to the big control panel, tugged, with my bound hands, at the lever marked "Main Entrance." In the television screen above I could see the great gate of the factory swing open. Hensic and his men poured into the enclosure.

"The end of immortality!" I muttered.

"And the beginning of a new life!" Anne said softly. "For you and me—for all humanity!"

I glanced down at her soft, inviting lips and shook my head.

"Huh!" I muttered. "A fine time for our arms to be tied!"

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One thing has loomed in our minds—the pyramid

VIA PYRAMID

By GORDON A. GILES

Author of "Via Asteroid," "Via Venus," etc.

BARONKHEE, Earth!
"Baronkhee" is the Venusian word of greeting, as nearly as we can render it in English.

Venus Expedition Number One re-summing contact with Earth, via ether-line radio. Operator Gillway at the keys. Your code contact was picked up clearly yesterday, so I assume this message will reach you, in turn. My ion-charger is still working, and half the batteries are at peak load.

You will probably never know how

welcome your code-words were, after thirteen months of just the click signal, with the sun between our two planets. We had the same experience on Mars—Atwell, Greaves, Parletti, Markers and I—when we reestablished communication after a long Martian year. It is like breaking out of a grave. It is good to know that a whole world of our fellow men are thinking of us, hoping for us, cheering us on.

But Greaves is not at our side this

time. He is dead, gone from us.

Well, the first thing you will want to know is what we think our chances are of getting back to Earth—the remaining eight of us. Secondly, how we survived these past thirteen months. My last message painted a pretty dark picture.

The circumstances thirteen months ago were as follows.

The highly-oxygenated air and saturated humidity had combined to eat through many of our sealed food containers. The swift-acting food mold, entering, had ruined these supplies. Two-thirds of our food stores were gone, at a stroke! And the other third under constant threat.

Second, the Venusian natives, at first friendly, had suddenly attacked, and very nearly dragged our ship over a cliff to maroon us without hope. Only Domberg's magnificent sacrifice of his life—dying on top our space ship and driving the natives away with the death-mold—had saved us from that extremity.

Third, when we tried the ship's engine, we found the fuel so contaminated with water that it was useless in that form. We were marooned, for the time being, and faced with the double menace of the unfriendly natives and starvation.

Now, thirteen months later, the natives and the food problem have been solved, and we have high hopes of dehydrating our fuel. Thus the picture is considerably brighter. I will explain more fully tomorrow.

We are all in good shape, though this hothouse planet is not the best of climates. We are all lean and pale-skinned, from lack of sunlight, and at times we're quite irritable from the constant sticky humidity. Our skins have learned to sweat profusely, which helps some, but one and all we look forward to being back on Earth. Karsen's stump, from the amputation of his hand by Parletti, is perfectly healed. He hardly misses it, he says. We all admire him for his cheerful acceptance of his handicap.

Venus, in a month, will again be at its closest to Earth. We hope to make a start before then. As on the Mars

expedition, one of the things we miss more than we can say is music. Can you send us some? Even a dirge of practice-scales on the piano would sound heavenly to us.

FOUR Hundred Fifty-Eighth Day. About the natives. You will note that I used their greeting—"Bar-onkhee." They are friendly again. It happened this way.

After their unsuccessful attempt to wreck our ship, they left us alone, though their sailing vessels hovered offshore. Then, one day, a larger ship landed at our beach. A finned Venusian with a retinue approached our camp. He had a certain regal air, and was obviously their leader or king, come to see these strange creatures from the "sky world."

We were on guard with our rifles and submachine-gun. We didn't know exactly what his intentions were. At the time, we hardly cared what would happen. That morning Greaves had served us our usual small rations and announced that it was the last of our canned food stores. Starvation faced us. We were almost itching for a fight, hoping they would attack. We could at least go out in a blaze of glory.

We were, I think, just a little mad.

The "king" looked us over. Back of him were thousands upon thousands of the oily-skinned, half-aquatic Venusians, all armed. We knew they still considered us invaders, the van of killing hordes, as had happened once before when the builders of the pyramid had come—so their legends went, anyway.

They had us, even if they didn't know it. Our ammunition would eventually run out. Retreating to our ship, they could besiege us and we would starve. There was not one of us at that moment who believed we could be saved.

But a miracle happened. Beside the king waddled his young son. Eagerly pushing forward, as youths of any race or world might, his father thrust him back. Quite accidentally, the young Venusian stumbled back against the point of a dried pincher-

weapon, held by another native. The gash made instantly discolored, with death-mold.

The king of the Venusians whirled with a cry of anguish. We pitied him. As the grimly necessary custom was, on this world of superswift life and death, his son would have to be killed on the spot. His body would have to be tossed into the sea, so that its quick decay wouldn't taint them all with the horrible death-mold.

The king raised his hand in a signal, and one of his retinue raised a spear, to kill the youngster. The latter, in their tradition of stoicism, hung his head and waited for the death-blow. We could see the king hesitate, holding back the signal that would kill his son.

At that moment, Parletti ran forward. He took us all by surprise, natives included. Parletti grasped the boy's hand and yanked him toward our sheet-aluminum house. Swinerton ran to help and they disappeared within. The rest of us still faced the natives, expecting any moment they would charge. But they didn't. Their curiosity dominated their antagonism.

Parletti and Swinerton reappeared ten minutes later, leading the dazed Venusian youth by the hand. They had irradiated his wound with ultraviolet rays, driven away the death-mold, and then taped bandages soaked with strong antiseptic over it. They had saved the youth's life.

IT was magic, of course, to the natives. Instantly their attitude changed. The king yelled out a few words and their weapons were thrown in the mud. To be brief, the natives were from then on our friends. Parletti essayed by gestures that we needed food. Promptly they brought from their ships fresh meat, edible roots and a breadlike material.

"Men," said Captain Atwell, summing it up, "that was an eleventh hour reprieve from the electric chair!"

And that's exactly how we felt. We drank a toast, in rain water, to Parletti for his quick-witted act.

The natives have since shown us their secret of preserving fresh food

from the greedy molds. They wrap it in the leaves of a certain herb which the molds shun.

And so, through kind Providence, our darkest hour passed. From then on, two of our problems were solved—food and the natives. Barring other unforeseen things, we could survive on this planet indefinitely. The main concern left was to dehydrate our fuel, for a return to Earth.

But this was a knottier problem, by far. Venus is mostly ocean, its atmosphere moisture-choked. It rains every five hours. Water, water everywhere. How to dehydrate tons of rocket fuel, in that dripping environment? Distillation within the ship was out of the question, as we had no vacuum apparatus for low temperature boiling. High temperature boiling simply meant explosion.

Will continue tomorrow. Batteries low.

FOUR Hundred Fifty-Ninth Day. Before we had much chance to discuss this pressing matter, night fell.

I recall that in my previous reports, I said we were almost certain Venus kept one face always toward the sun. Markers had figured out, from rainbow effects, where the invisible sun was, behind the eternal sky mist, and it didn't seem to move. But it does slowly. Or rather, Venus rotates slowly. A Venusian day is fifty-six Earth-days long. It therefore rotates only four times during a Venusian year. This has been the dragging effects of the powerful tides caused by the near sun.

We noticed a gradual darkening—"twilight"—descending upon us. Finally true night fell. We wondered what the night of twenty-eight Earth days would be like. Can you imagine a steady rainfall for that length of time? Yes, it rained, interminably, from the moment the sun's last glow vanished, to the day it reappeared.

Wilson, with his meteorological knowledge, says it is the natural result of the cooling of a whole hemisphere. The clouds over Venus are perhaps fifty miles thick. There may

be as much vaporized water in them as would fill the Atlantic Ocean hollow. Countless trillions of tons. And this comes pouring, smashing down through the long night without one second's intermission!

We were nearly flooded out. We had to desert our metal hut for the waterproof ship. The natives brought us food, sloshing through the muddy current with evident delight. We played cards and chess until we were sick of them. For twenty-eight Earth days, nothing but the monotonous patter of rain, as if it would keep up forever. Tarnay went out for exercise once and came back in half drowned. Outside, it was as black as pitch—no moon or stars. There was only one blessing—the temperature dropped to a comparatively cool ninety degrees.

We have passed through five such confining "nights." We veterans of the Mars Expedition think the Martian winter of ten months hardly more trying. To keep our nerves in check, we instituted a continued story, carried on by each man in turn. Our hero—we named him Hezekiah—equipped with a space ship far better than ours, ran through some quite remarkable adventures before we were through. Books would have been a godsend. In the future of space travel, we hope ships will be able to carry more than the grim, basic necessities of life.

But dawn came, after each night, as it must on Venus as well as on Earth. We cheered the day periods, though it meant rising temperature.

Thanks for that great recital you sent us. However, we hardly expected the world's dozen greatest musical artists to dedicate their talents to us. It is an honor we appreciate. Their music was superb.

FOUR Hundred Sixtieth Day.

Captain Atwell, with the natives friendly and food available, allowed the men to indulge their itch for scientific studies. No solution of the fuel problem had been reached. But we philosophically waited for inspiration. In the meantime, Venus and its strange mysteries lay before

us, a new world to look over.

Parletti, with his shovel and electroscope, found three separate deposits of radio-active ore within a half mile of camp. He makes the conservative estimate that fifty million dollars worth of radium lies out there, at our feet. Somehow, that thought doesn't stir us. Future industrial groups will undoubtedly fight over them.

We have discussed the matter, impartially, and think the Council of Nations should begin now to make radium exploitation a governmental rather than private project. Else there will be endless bickering, market manipulation and badly snarled finances.

Greaves, with his compact little electron-microscope, soon catalogued a hundred new organic compounds unknown on Earth. Some are amazing.

There is a type of molecule in a plant, for instance, that contains every protein, fat and sugar necessary for nutrition. It is a food-concentrate of nature's devising. Cultivated on Earth, the plant may in the future feed millions from a few acres of ground.

Markers has been taking color pictures of the periodic rainbow effects. He has managed to catch some of their grand spectacle—hundreds of brilliant bands of color lacing the sky. If we brought nothing else back from Venus, they would be a worthwhile prize. It is heart-stopping beauty.

Tarnay and Karsen have made complete records of the ionic content of the air, and predict that ion-generators on this planet could in one year turn out more electricity than all the coal Earth ever had. Thus, Venus would be kind to industrial projects, except for its damnable climate.

Wilson has worked out a tentative new theory of cosmic-rays, because of the fact that they penetrate Venus' thick blanket of air. He says the world of physics will be astounded.

Captain Atwell, Swinerton and myself have done some scouting around. Heavily armed, we have penetrated the jungle part way. The great ten-foot killer-bears with pincher claws

charged now and then, but we've found a simple way to stop them. One good shot at their legs brings them down like ten-pins. Their enormous weight topples them at the slightest weakening of their pedal support.

Swinerton, biologist to the core, finds the rampant jungle life a thrilling, unexplored domain. We have to drag him away. He says all Venusian animal life is semi-aquatic, and always will be. As he has pointed out, every queer creature we see has flippers as well as limbs, or flipper-limbs combined.

The oddest thing we saw was a deerlike cuss with hoofs at the end of flipper-like legs. It bounded swiftly away, like a startled antelope, and then jumped in a narrow river to swim away at scarcely less speed. Further down, two great crocodile jaws clamped over it. This water monster then calmly climbed a tree, with clawed fins, and slept off its meal.

And so we catalogued the phenomena of this sister world of Earth's, feeling like children in some strange fairy land.

TO give an anecdote of that time, showing we are still human even on Venus, Markers and Tarnay had a quarrel. It was a surprisingly trivial thing. Markers casually asking Tarnay to help scrape mud off his—Markers'—boots. Tarnay declined, casually.

The matter should have ended there, but Markers, adopting a superior attitude because he was a veteran of the Mars expedition, insisted the younger Tarnay should comply. Both rather hot-tempered, with the irking humidity to egg them on, they exchanged bitter words.

Captain Atwell stepped in. It might lead to a fight, which would be dangerous, both because of the death-mold, and the bad effect on our unified spirit. With his usual sagacity, Atwell laid the blame on Markers—and banished him from camp!

Markers stubbornly packed up and left. We all thought Atwell had been too drastic. But he knew men. Markers went a hundred yards, turned, and

came back, thoroughly ashamed of himself.

He apologized to Tarnay and since then they've been like brothers. And the incident has knit us all more closely together, for we realize our human foibles have no place in this grim stand against an alien world.

FOUR Hundred Sixty-First Day.

But in all our activities, one thing loomed in our minds. The pyramid. Strange as Venusian things may be, it is stranger still to see such a familiar object.

It had been in our minds and conversations continuously. Old Egypt on Venus! The vague connection with an ancient Venusian legend, and with dead Martian civilization, only added to the wonder.

At last Captain Atwell gave the word. He had been holding off visiting it, since it was a considerable distance away. Not till we were assured the natives were no danger, nor ferocious beasts, did he give in to our impatience.

"Parletti, Tarnay, Markers and Gillway," he picked us out, grinning at our eagerness. "You others guard camp. You'll get your chance later. We'll only be gone a few hours. Danger signal—three shots in succession, as usual. Let's go!"

We sloshed through mud a foot deep in our knee-boots. Each carried a rifle, pistol and bandolier of ammunition. It was the farthest we had gone from our ship, since landing on this super-prolific planet of rapid death and decay. Nothing molested us on the way and we finally stood before the great stone edifice.

Parletti, geologist, took one look at the pitted, weather-worn stone.

"Twenty thousand years old, at the very least!" he said.

Thus, again, it precedes recorded human history on Earth. We stared at it, awed, wondering what historical pageant lay behind it.

Walking completely around it, measuring the steps, Parletti estimated it as 1000 feet on a side and 700 feet high, as compared to Earth's largest, the Cheops Pyramid, 756 and 500

respectively. We had been hoping to find an entrance.

Parletti was in a fever to get inside, perhaps to find ancient records. Dordaux had been that way before the sealed pyramid on Mars.

This one too, seemed locked from us, when suddenly "Baronkhee!" sounded in our ears and Jimmy appeared from nowhere, gesturing us to follow. Jimmy is the name we had given the king's son whose life we had saved to replace his unpronounceable one.

He led the way up one side of the pyramid, perhaps a hundred feet off the ground. The rough, cracked stone blocks afforded us foot and hand holds for climbing. Jimmy pointed out a narrow passageway leading into the structure!

Captain Atwell, ever cautious, stationed Tarnay and Markers outside as guards and the rest of us went in. Jimmy led the way with a half-scared air about him. The long passage, leading slightly up to keep out rains, ended finally in a large central chamber, in the heart of the pyramid. Captain Atwell swept a hand-flash around. Against the walls were stacked stone tablets, with heiroglyphic writing on them.

I'll never forget that moment. The air was dry, musty, age-old. Hoary antiquity surrounded us. Parletti trembled as he ran his fingers over the chiseled indentations of the heiroglyphics. They must be records of pre-human civilization—Martian, undoubtedly—stretching into a remote past.

WHILE Neolithic man on Earth was first learning the use of fire, the Martians had roamed space and left their mark in these pyramids. Space travel has opened Earth's eyes to a vastly broadened outlook. There is a history of the Solar System we know nothing about.

We did not stay long the first time. Captain Atwell was apprehensive, in the midst of those thousands of tons of crushing rock. He murmured something about secret doors falling, trapping us. Parletti was dragged out

by main force. On the way back to camp, he wheedled Captain Atwell into letting him go back the next day, for examination of the stone records.

Tonight, we are all a little stunned, just having received your message from the Council of Nations. If we got it straight, the Council has ceded to us and our heirs the full value of the radio-active deposits near our ship. Fifty million dollars divided among eight men! We all agree we hardly deserve it, pioneers of space travel though we may be, as President Mason put it. We can only say—thanks! We have voted shares to the relatives of Domberg and Greaves. I mentioned the fact that Greaves is dead in my first broadcast but I will explain the circumstances later.

FOUR Hundred Sixty-Second Day. Parletti went back to the pyramid the next day, with Greaves, Karsen and Wilson, and many more days after that. The pyramid began to have a druglike fascination for him. Each day, when he came back, we'd all listen breathlessly.

He had found a key to the Martian heiroglyphics. On one tablet, underneath a line of Martian writing, was a line of Egyptian heiroglyphics—a sort of Rosetta Stone. From that, slowly and laboriously, Parletti gleaned a few facts.

The Martians had temporarily colonized Venus, perhaps fifty thousand years ago. They had been rather ruthless with the natives, to all indications, bearing out the ancient Venusian legend. We can hardly blame the Venusians for first attacking us, thinking we were the same sky raiders. Parletti's timely act of life-saving was our only salvation. Legends of a merciless race must fade before a plain act of kindness.

Excitable little Parletti claimed also that there were references to Martian doings on Earth! He insists that both Atlantis and Neanderthal Man are mentioned. That the domineering Martians killed off Neanderthal and later warred on Atlantis. It's a fantastic story. Still, the vanishment of Neanderthal Man has always

been an anthropological mystery. And the legend of Atlantis' destruction persists, despite debunkers' claims that such a land never existed.

However, we suspect that Parletti has let his imagination supply unwarranted details. Those ancient records cannot be read in a few days. It will take years and years of patient research, by expert archeologists, before the true story unfolds.

Parletti made a still more outrageous statement. He says the records indicate that there are Martian pyramids on Mercury, too! And perhaps on Jupiter's moons. The Martians had been everywhere. Nor, he says, had their pyramids been constructed only as record-crypts. There was some greater purpose behind them, something involving Martian rule of the Solar System, in that long-gone time while man was in the Stone Age!

However, all that to the side, our pressing problem still remained of drying our fuel. Conjunction time was fast approaching. Somehow, we had to dehydrate our fuel.

Will resume tomorrow.

FOUR Hundred Sixty-Third Day. In desperation, Captain Atwell finally agreed to let Greaves, Markers and Tarnay try out distillation. They worked in the metal hut alone, rigging up a big retort of sheet aluminolloy, lined with tar. There was an explosion the second day that sent the retort up through the roof. By a miracle, Markers and Tarnay were unharmed, swathed in mud-packs. Greaves was killed, his head half blown off.

We buried his body quickly, before the decay-molds could get at it. And thus has gone the sixth of the original ten men who first left Earth for another planet—Mars. Proosett, Cruishank, Alado, Dordeaux and Charles Swinerton—brother of the Swinerton with us here—and now Greaves. Only four of us left of that expedition to Mars—Captain Atwell, Markers, Parletti and myself. It was like part of us dying, when Greaves went. We had all been through so much together, on Mars and the Moon, as well

as Venus. We caught ourselves listening for Greaves' deep-toned laugh, for days afterward—a sound we would never hear again. Even Domberg's death had not meant as much to the four of us—for he had not been with us for so long—and of course it was something we could not quite explain to the new men with us on this Venus Expedition. They also felt badly about Greave's death, of course.

We were back where we started, then. Though we had kept up our morale before the accident unnerved us. We forgot how to smile, and Earth seemed an unattainable goal.

Even Parletti's queer actions failed to disturb our apathy. He went alone to the pyramid, after the following night period, and came back with a thermos bottle which he opened without a word. He poured out an oily liquid—part of our watered fuel supply—into a dish. Touching a match to it, it flared up with a bright, hissing puff. Exactly as though it were dried!

And it was. Parletti explained. His numerous hours in the pyramid had called something to his attention—that the interior was bone-dry. It held dry air, though it had an outlet to Venus air, dripping with water. And that air had been dry for twenty thousand years!

Parletti had dried a thermos bottle full in two hours, simply by exposing the liquid to the desert-dry air in the pyramid. It had sucked up the moisture greedily.

We were all thunderstruck for a moment, then let out a whoop of frantic joy. If a pint could be dried that way, why not the rest?

It was just fifty-two Earth days ago that this ray of sunshine lightened our gloomy future. Since then we have worked like beavers, transporting our watered fuel to the pyramid and bringing it back dried.

Wilson has calculated that we will finish in four days, barely in time to shoot Earthward during conjunction. If we miss the time by a few days, Venus will be ahead of Earth in its orbit, and our ship would not have enough reserve fuel to backtrack. We

would then have to wait for the next conjunction. We are determined to finish in time.

Another thing that lends haste to our labors is this—our UV apparatus is about shot to pieces. It barely gives enough radiation to protect our minor cuts and bruises from the frightful, lurking death-mold. The apparatus will be useless soon. After that the slightest break in our skin will mean certain death, as the natives of Venus have been resigned to for all their history.

FOUR Hundred Sixty-Fourth Day.
The drying of our fuel is going on apace.

To go into a little detail, we transport a can at a time, carried by one man to the pyramid. Here, in the central chamber, it is poured into a pan of sheet alomalloy, twenty feet in diameter. We tore down our metal house to construct the pan. This inch layer of the fuel is stirred continuously by shifts of three men. And, surprisingly, Jimmy. He has been helping us like a trooper, evidently with a keen sense of gratitude. The dry air sucks up the moisture from the stirred liquid.

Just why the process works, we're not sure. We have dried tons of liquid, and yet the chamber's air has not become saturated with moisture. Tarnay, examining a series of stone-grated flues, surmises that these lead into a space between the chamber and the outer wall of the pyramid. By some miracle of air convection, rising water vapor is sucked into these flues and condensed somewhere below, perhaps underground.

Martian genius devised this air-conditioning system, built to last for ages. Their motive is understandable, since the Martians came from a dry world and probably could not bear the least humidity. At any rate, however and why ever it was done, we can silently thank a vanished race for their pyramid. It and any other pyramids they built are probably the only truly dry spots on all of wet, wet Venus. It is our salvation.

And so, for twenty-four Earth days,

we've been drying the fuel. We started fifty-two days ago, but a Venusian night of twenty-eight days intervened. It was impossible to visit the pyramid during that ceaseless downpour. We would not have found our way in the utter dark. We stayed in the ship, fidgeting, worrying whether our dried fuel would in the meantime again become impregnated with water. But we had sealed the tanks thoroughly this time. Dawn came at last, and more trips to the pyramid.

It has been backbreaking, grinding labor. I can hardly punch these keys. My whole body is stiff and sore. But we work with a will, for it means escape from Venus. The margin is close, but we will make it. Karsen, rechecking his course and orbit figures, says the deadline for our departure is still three days off. We should be finished with the fuel in two.

FOUR Hundred Sixty-Fifth Day.
Something unforeseen, and pretty close to disaster, has struck!

Three men are entombed in the pyramid!

It happened just five hours ago. I had been at the camp, just preparing to hoist a can of fuel to my shoulder, to bring it to the pyramid. Karsen, our cook and camp attendant because he is unable to do heavy labor with his one hand, first saw the stumbling, shouting figure of Parletti approaching, from the pyramid.

"Tarnay, Markers, Wilson — trapped in the pyramid!" he gasped.

We hastily wakened Captain Atwell and Swinerton, whose sleeping period it was, and listened to Parletti's half-incoherent story. Jimmy stood beside him, having followed.

I'll go back a ways, to make this clear. Jimmy had become a devoted satellite to Parletti, his savior. Parletti, in turn, had developed a sort of sign language and could vaguely communicate with the Venusian youth. Jimmy had revealed to him, this morning, that there was another entrance to the pyramid, to another chamber. Still intrigued by the history of the structure, Parletti had followed Jimmy to the other entrance, after their

stirring shift was over. It proved to be a blind alley, a hundred feet in. But then Parletti saw there was a stone door. Also, in a wall niche, there was a balanced stone, which might be the key to unlock it. Parletti shoved against the balanced stone.

Sure enough, there had been a rumble of giant stone counterweights, somewhere below, and an enormous block of stone—the door—moved upward into a hollowed space.

Parletti had a glimpse of strange objects within. He was about to step in eagerly, when it happened. At this point in the telling, Parletti's face turned pale in remembrance.

Hardly had the rumble of counterweights for this door ceased when another, similar rumble sounded from below—from the other entrance. It was followed by a powerful thump that vibrated through the stones under his feet, and all through the pyramid.

Alarmed and wondering, Parletti and Jimmy went back to the other entrance—to find it sealed! A great stone block had moved down, blocking the way. Not a sound came from within. Tarnay, Wilson and Markers were on the other side, perhaps beating their fists against the barrier and shouting, but no sound worked through.

Captain Atwell listened with set lips. He didn't censor the pitiful Parletti, told him to buck up. It wasn't his fault. He hadn't known it would happen. Parletti, half-crazed with remorse, straightened up.

We all hurried to the pyramid, except Karsen, to see what must be done. On the way, Captain Atwell made the supposition that the two doors were connected in some way, by a system of age-lasting stone counterpoises. The Martian builders had had some reason of their own for the arrangement. When one door closed, the other automatically opened. Therefore, to open the fuel-drying chamber, we would simply have to close the one Parletti had opened.

When we arrived, we saw why Parletti's white lips were pressed so pain-

fully together. The balancing-stone mechanism he had operated was useless for the reverse process. The stone had cracked in half, weakened no doubt by the ages since its installation.

The ghastly fact faced us that the stone door could not be lowered, to open the one entombing our men!

We went below, searching, but found no similar operating mechanism for that door. To cheer the men inside, Captain Atwell tapped a Morse code signal through the rock with his gun-butt. A clicking message came back, saying they were all right, and knew we would get them out soon.

But the question is—how?

And this delay, on top of it, may slow up the fuel-drying beyond the deadline for our departure from Venus!

FOUR Hundred Sixty-Sixth Day.

The three men are still entombed. Twenty-four hours now. And the inexorable time for our departure twenty-four hours nearer.

We've tried everything we can think of. We tried prying up the stone block sealing the men, with levers of metal. We couldn't budge it an inch. It probably weighs tons. Only great counterweights of equal tonnage could swing the stone up. The Martians had evidently planned against penetration. But why the two doors connected in that way? It is a secret lost in the remote past.

We tried charges of our rocket fuel, of course, hoping to shatter the stone block. The explosions only chipped its surface. We had to stop, when cracks appeared ominously in the ceiling. It would be worse to have the whole passage collapse about our ears, burying the three men forever. We also tried chiseling by hand, but even big Swinerton's most powerful hammer blows barely flicked off tiny bits.

We're pretty discouraged. We wonder how the men inside must feel. There's that old story of a curse hanging over pyramids on Earth. We almost feel there's something to it, even here on Venus.

Four Hundred Sixty-Seventh Day.

No results as yet. Men still entombed. Deadline for leaving Venus at this conjunction within twenty-four hours.

We won't leave while they're alive, though they've insisted on it, by code through the stone block.

Captain Atwell sent Swinerton and Parletti to examine every inch of the pyramid's faces, walking along each successive ledge, for another possible entrance. They found none. Jimmy told us we wouldn't, by gestures. Incidentally, we don't blame Jimmy either, for what has happened, though he led Parletti to the other door. Yet somehow, Jimmy understands the situation and seems to have an air of penitent guilt. We like him for it.

Well, Earth, we haven't given up hope entirely, but it's hard to be optimistic. Thanks for your voiced sympathies, and the encouraging messages from all over the world, transmitted to us.

FOUR Hundred Sixty-Eighth Day.

The men are out, thank God!

Parletti had the idea, early today, of taking a look in the room revealed by the newly opened door. We followed. We almost forgot our bleak situation in looking over what lay in here.

It seems to have originally been some gigantic machine. Most of the metal is gone, but a skeleton framework remains. A tube of some sort pointed straight up out of the pyramid. Parletti says it is probably the main reason why the pyramid was built. And it may be the link as to why pyramids were built on Earth, Mars, and possibly other planets. For what purpose? Time's mouth is closed.

But then suddenly Parletti found what he had been vaguely hoping for. Another balanced-stone mechanism, possibly a second key to the door system! If we had known two days ago, but no use to think of opportunity lost.

Parletti started to shove the pivoted stone over, but Captain Atwell jerked

his arm away. If the first mechanism had fallen apart, after use, this one might too, sealing us in here.

We looked at each other.

Obviously, that was an ominous possibility. Yet the thing had to be tried, to release the men below. Therefore, one man had to do it—and take his chances.

At the worst, it would be one life for three.

It was a tense moment. Who should it be? Captain Atwell called us all into the corridor, to discuss the matter. Swinerton suggested drawing lots. We had done that on the Moon, once—

Parletti very calmly refused, and demanded the right to do it himself. He had unwittingly put those men in their trap. What more right, he asked, than that he risk his life to undo the deed?

He started for the room, as soon as he said it, and then at that moment there was a scraping rumble of stone against stone.

The door was going down, as if by some form of magic!

It clamped shut in seconds, while we stared pop-eyed. Then we heard the answering rumble from below. The tomb of Tarnay, Wilson and Markers opening!

We ran below. They met us half way, throwing their arms around us in joy. They were haggard, starved, thirsty, but otherwise none the worse for their three days of burial. We tried to explain the miracle of the doors working by themselves.

"Where's Jimmy?" Parletti suddenly shouted.

And then we knew. Jimmy had pushed the balanced-stone! He was in that other room, beyond any power to save him. He had divined the situation, slipped in while we were talking, sacrificed himself. We had saved his one life. He had saved four of ours.

In the annals of space pioneering, the name of Jimmy, son of Venus, must be included. We have all solemnly pledged that. Parletti, I might add, wept openly for a being he had known as friend, though an alien.

FOUR Hundred Sixty-Ninth Day.
Good-by, Earth, for the time being!

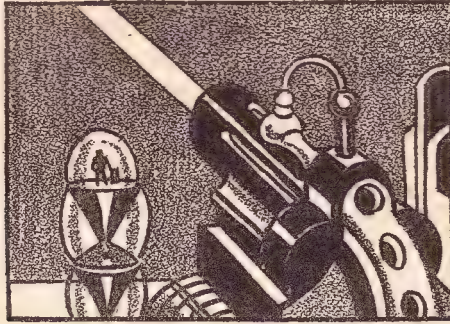
No matter how often Karsen figures it, we can't take-off for Earth now. The episode in the pyramid shoved us past the deadline. The planets wait for no man. If we rocketed into space now, we'd reach Earth's orbit too soon. Venus has an orbital velocity six miles greater than Earth's. We can't cut down that difference with

our limited fuel supply.

Our situation, frankly, is grim. Before the next conjunction, fourteen months from now, our fuel may again be water-logged. Our UV apparatus will be useless. We will have no sure protection against the deadly molds.

If Providence is kind, we will resume etherline contact in fourteen months.

Venus Expedition Number One signing off.



COMING IN NEXT MONTH'S ISSUE

THE LIGHTNING MEN

A Complete Novelet of Earth's Exiles

By **JOHN COLEMAN BURROUGHS**

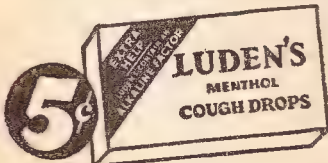
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PLUS A COMPLETE SCIENTIFICTION NOVEL BY
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CLOTHESPIN NOSE

Sensational extra help for colds—with Luden's! These famous cough drops not only help soothe throat, but release a menthol vapor—which, with

every breath, helps penetrate clogged nasal passages, helps relieve "clothespin nose!"



Science Quiz?

DO you know the seven wonders of the world? They're biology, chemistry, physics, astronomy, botany, geology and zoology—as far as this department is concerned! So here's another special streamlined shipment of super-scientific stickers and stumpers. Solve 'em, or else—turn to page 128 for the correct answers!

POSITIVE OR NEGATIVE

The following statements are either true or false. Many a true word is spoken in jest, so look before you pick. (Par for this course—15 correct.)

1. In the latitudes of the United States the planet Mercury may rise at any time of the day.
2. "Mechanical advantage" theoretically represents the ratio of the force exerted by a device to the force acting upon it.
3. The efficiency of a machine is either unity or less than unity.
4. The lines of magnetic intensity around a current-carrying wire are circular, having the plane of the circle perpendicular to the axis of the wire.
5. Malarial parasites in an infected person are found within the white blood corpuscles.
6. It is not possible to represent accurately a spherical surface on a flat surface.
7. The surface gravity of Mars is such that it could retain an atmosphere of oxygen, nitrogen and other heavy gases, and probably water vapor as well.
8. One body has twice as much mass as another body if it offers twice as much force in opposition to the same acceleration, no matter where the two bodies are in the universe.
9. Mercury is the only metal that is liquid at ordinary temperatures.
10. Metals in their normal, pure state are crystalline.
11. It is believed that meteors entering the Earth's atmosphere with velocities less than 26 miles per second are members of the Solar System.
12. The Earth receives at least twice as much heat from the sun as does the moon.
13. Morphine is probably the most valuable drug in medicine.
14. A nervous system may exist in some plants.
15. Distant vision is more tiring than close vision.
16. A concave lens is used to correct near-sightedness.
17. Nitric acid is colorless.
18. While two persons may eat the same amount of food, one may gain and the other lose weight.
19. Orchids form the second largest family of plants.
20. Liquid oxygen is strongly magnetic.

TAKE A LETTER

Here are ten incomplete scientific facts. Three or more suggestions are offered as possible fill-ins for each statement, but in each case only one is correct. These ought to be easy—if you know your scientific vitamins from alpha to omega. (Par for this group—7 correct.)

1. The most abundant metal present in ocean water is: (a) sodium, (b) magnesium, (c) iron, (d) phosphorus.
2. The mass-luminosity theory fails to agree with observational results for: (a) giant stars, (b) white dwarf stars, (c) dwarf stars, (d) Cosmic rays.
3. The planet possessing the most eccentric orbit is: (a) Earth, (b) Mars, (c) Mercury, (d) Saturn.
4. The heat produced by a fasting individual at rest 12 to 15 hours after the last meal is: (a) potential energy, (b) kinetic energy, (c) basal metabolism, (d) zero.
5. It is believed that for every star which can be observed with the 100-inch telescope, the number of stars which cannot be seen is: (a) 9, (b) 29, (c) 109, (d) 1,290.

6. The first definite record of observation of a variable star is in connection with: (a) Nova Herculis, (b) Vega, (c) Procyon, (d) Mira.
7. The length of a nautical mile is: (a) 5,080 feet, (b) 5,280 feet, (c) 5,820 feet, (d) 6,080 feet.
8. The color of nickel salts in solid or solution is: (a) green, (b) blue, (c) white, (d) brown.
9. The best source of proteins, fats and carbohydrates of the following foods is: (a) meats, (b) nuts, (c) cheese, (d) fish.
10. The number of beats of the heart for the blood to make a complete circuit of the human body under normal conditions is: (a) 25-30, (b) 35-40, (c) 50-55, (d) 60-70.

CAUSE AND EFFECT

When boy meets girl—the result is romance. When an irresistible force meets an immovable object—the result is an explosion. Each of the terms in the right-hand column is the result of a combination in the left-hand column. In the parentheses below put the number of the combining-terms in the left-hand column which corresponds with the results in the other column. (Par for this circuit—8 correct.)

- | | |
|---|--|
| 1. Alga and fungus () Anti-gradation | 6. Prism and light () Spectrum |
| 2. Anabolism and katabolism () Geologic time | 7. Sodium and chlorine () Symbiosis |
| 3. Carbon dioxide, water, sunlight () Metabolism | 8. 238 protons and 146 electrons () Synapse |
| 4. Dendrites and axone () Photosynthesis | 9. Uranium and lead () Uranium |
| 5. Male and female gamete () Salt | 10. Vulcanism and diastrophism () Zygote |

SHADOW AND SUBSTANCE

The sun's got a shadow, too! Astronomers quaintly refer to it as an eclipse. See if you can throw a little light on the solar subject by filling in each of the blanks below with its proper term. (Par for this lap—4 correct.)

With a large source of light like the sun, the shadow cast by a smaller body such as the Earth or moon consists of a long, conical shadow, called the, where no light at all reaches, and a partial shadow, called the, surrounding the former. An eclipse of the moon can only occur at the time of moon. Similarly, an eclipse of the sun can only occur at the time of moon.

But since the moon's orbit is inclined to the ecliptic about degrees, an eclipse of the sun is impossible unless conjunction of the sun and moon takes place within about degrees of one of the nodes of the moon's orbit. The corresponding limit for a lunar eclipse is about degrees.

CALLING DOCTOR QUIZ

How good are you at diagnosis? The following terms, when operated upon and rearranged in their proper order, all pertain to medical phraseology. Number 2 ought to throw you into a sweat. (Par for this stretch—7 correct.)

- | | | | |
|--------------|----------------|------------------|------------------|
| 1. ergm | 2. veerf | 3. sealsem | 4. vinecac |
| 5. railmaa | 6. sunteat | 7. tonaxitin | 8. notefinci |
| 9. mennapiou | 10. ratehidipn | 11. mmnniiaalotf | 12. solrutsibecu |

WHAT'S YOUR SCIENCE I. Q.?

After you've completed the SCIENCE QUIZ and checked your results with the correct answers, get a slide-rule and compute your score. Here's how you rate:

49-59—A Mental Giant.
 41-48—A Human Encyclopedia.
 35-40—B.B. (Bachelor of Bookworms).

30-34—Try Crossword Puzzles.
 15-29—Stick to Fiction.
 0-28—Absolute Zero.

Song at Twilight

Meet the Abbott Family,
the Solar System's Most
Captivating Quartette, as
They Encounter the Little
Sir Echoes of Tomorrow!

A Complete Novelet
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They trained the
echoes carefully
for hours

CHAPTER I

Mists of Venus

HER brows knitted, Anne Abbott stared through the forward ports of the compact little K-2 spaceboat, *Sky-Hi*, as her husband, at the controls, dropped them toward the turbulent cloudiness that was Venus.

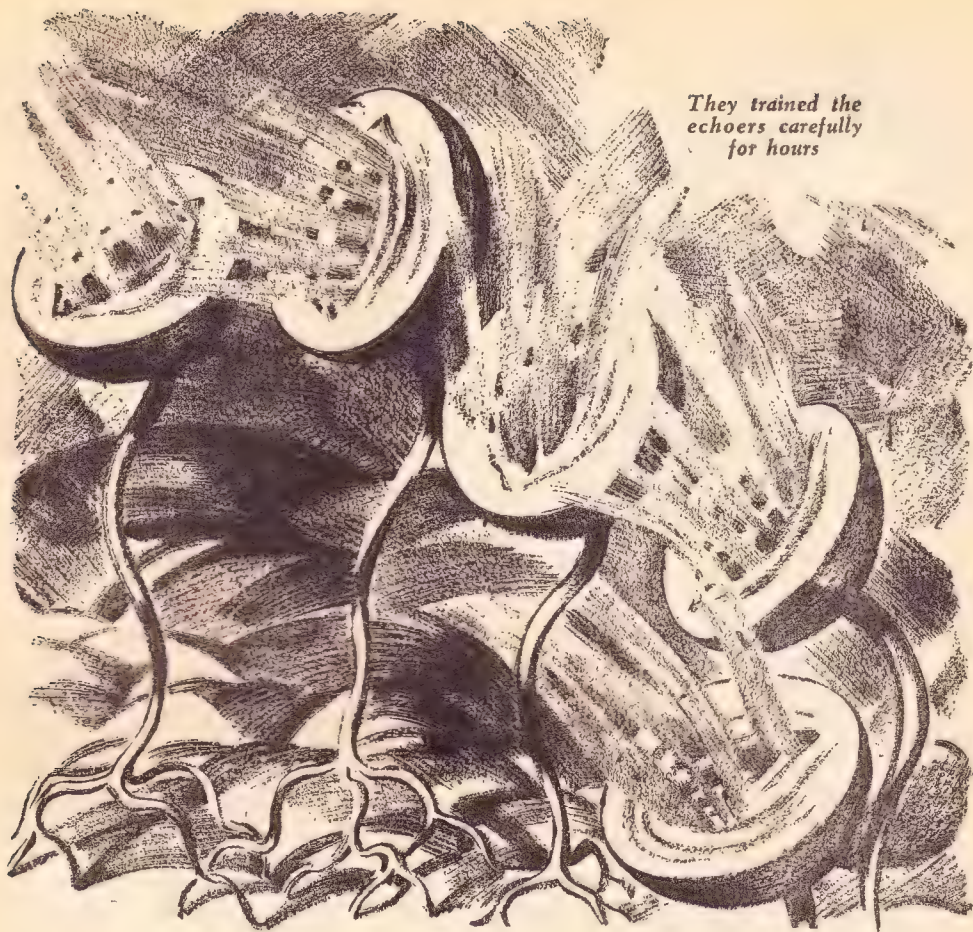
Beneath them seas of vapor glowed white in a great crescent in the sunlight, writhing and twisting like a vast protoplasmic cell in agony. They were approaching close to the twilight zone, and in the shadowy area between day and night vast tendrils of clouds were spewed twenty miles upward by the blast of the night-side wind. This terrific current of air blew

steadily from the dark to the daylight areas all along the twilight zone during the planet's slow revolution in her twenty-eight-day day.

The little frown still on her face, Anne turned to the tell-tale board beside the control panel. There she made an adjustment on the vernier control of the twin distance foci, and fiddled with the thermo-couple dials.

"Catch anything, hon?" her lanky, red-headed husband asked.

"Two objects behind us, Jim," she answered. "One of them is a hundred thousand miles back, and gives a zero thermo rating. That would be a meteorite, wouldn't it? But the other is only fifty thousand miles behind us, and it's giving off enough heat to make the thermo arrow quiver. That must mean a spaceship. The same one that's been behind us since right after



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Jim and Tommy Abbott

we left Mars. And it's closer."

Jim Abbott flashed a grin at her, his eyes reflecting an admiration that had never waned since he had married her eighteen years ago, when he was a unknown cub on the New York *Planet* and she, as Anne Lanier, was the musical find of New York, and while still in her 'teens, was starred in a long-forgotten musical show called *Venus and Mars*.

"Nothing to worry about, hon," he said. "But give Lani a buzz, and I'll let her take over the controls while I check. Unless you want to bring us down."

ANNE shook her head and grinned back.

"I'll stick to the housekeeping," she said. "Let Lani handle the mechanics of this new-type interplanetary flivver you let the boss talk you into giving a tryout. I still like our old spaceship better. I know the makers claim they've gone in for the woman's angle and simplified everything so we can operate them, but I'll let Lani do it. Guess I'm old-fashioned—but I'm only thirty-two, darn it!"

"Thirty-four," her husband corrected her blandly. "Just twice as old as Lani, and twice as beautiful."

A moment later, in answer to the buzzer signal, Lani Abbott stuck her

head inquiringly up the companionway from the living quarters. She had the same wavy dark hair as her mother, and the same eyes, deep-colored like the purple dusk on a Martian desert.

"Want me?" she asked alertly.

"Take the controls a sec, Lani," her father instructed. "Just ease us down. I want to check our detectors."

The girl took the controls, and Jim Abbott, author of the *Planet's* most widely read feature, "*Seeing's Believing*," took his wife's place at the instrument panel. Anne moved over to the radio and switched it on hopefully. Half the time ether conditions were too unsettled for anything but the superpowered Department of Space Navigation station to cut through.

Today a pleasant tinkle of melody filled the cabin. Anne relaxed and with fond eyes regarded her husband, bent intently over the tell-tale board, and her daughter, standing with feet apart and head erect, scanning the increasing mass of Venus. Then a woman's voice, firm and self-assured, came from the loudspeaker.

"This is Molly Manson, bringing women everywhere the menus of the world. This morning I have a recipe for you—Molly Manson's own old-fashioned lemon meringue pie. Take one-half cup of sifted flour, one and one-quarter cups of sugar, three egg yolks, beaten with the white of one egg—"

"Quick, give me a pencil, somebody!" Anne exclaimed. "Darn, where is there a pencil?"

But no one was listening to her. Jim Abbott took over the controls again from Lani.

"It's a K-one commercial boat, from the mass of it," he was saying. "The blasts of a K-two wouldn't give out enough heat for our tell-tale to register at the distance—we're working on standard mass production instruments, you know, not the super-sensitive mechanical brains they give the Patrols. If they're following us on their magnetic screen, as I think they are, we'll give them something to think about in another five minutes.

Then their screen will get all tangled up in Venus's subsurface ore deposits and go haywire. Watch me shake 'em off."

He swung the Benson control over, let full blast power hurtle them toward the Venus mist for ten seconds, then cut power entirely. Under gravity-plus they shot through the wind-whipped upper reaches of the planet's atmosphere.

For perhaps three minutes they were in darkness. Then, with gray fingers of fog plucking clamily at their ports, they shot through twilight into daylight and dropped downward, braking steadily.

THEIR sonic detectors were useless, not being compensated for Venus pressure, but the self-compensating gravity interactor gave them a height of seven miles, and at that level Jim Abbott kept the *Sky-Hi* steady.

"Darn!" Anne exclaimed in outrage, regaining her balance after being tumbled onto a padded seat by the unexpected maneuver. "Now that recipe is gone. Lemon meringue pie! I haven't cooked it since—"

"Oh, Mother!" Lani exclaimed in affectionate exasperation. "You are always wanting to write down recipes and never being able to find a pencil. Some day you'll really get all of one of Molly Manson's recipes down, and then you won't know what to do with it. Nobody will be more surprised than you."

"I like recipes!" Anne told her stoutly. "They're—well, they're something I can cling to when everything else is strange. There's something relaxing about cooking when you're upset. Some day you'll find out."

Her husband came over to slide an arm about her.

"You're brainy and beautiful," he said. "And just because you like to be old-fashioned about some things doesn't give Lani anything to laugh about. Wait till she has to whip up a soufflé out of the eggs of a Martian flying snake. Or fricasse a moon crawler. Then she'll yell for help. And anyway, I'm going to give you a



Lani and Anne Abbott

pencil. Riveted onto your wrist so it can't get lost."

Indignantly Anne drew out of his grasp.

"Oh, so you think it's funny, too, to see me hunting for a pencil just because I want to take down a recipe? Well, I'll show you. You wait and see."

Abbott grinned and squinted out the control port. The clouds thinned as they sped away from the night-side, but they were still moving through an obscuring mist.

"Any sign of them now?" he asked his daughter.

Lani shook her head. "Our magnetic screen indicates that we are in close contact with a large body, namely, Venus. Our visioscreen is no good in the mist. If we can't locate them, they probably can't find us."

"Jim!" Anne broke in, brought back to the thing that had been bothering her. "Isn't it time you told us who is following us, and why? There's been a lot of mystery since before we left Mars, and it makes me a little uneasy. After all, we had barely gotten Tommy settled in Colonial Tech there when you rushed us away in the middle of the night for Venus.

"And Venus wasn't in our original plans at all. I thought we were just going to make a tryout trip to Mars in this new family model spaceboat so you could write it up for the paper. And here we are on Venus, our fuel tanks low, and somebody following us."

The lanky newshound ran his fingers through his hair.

"Hon," he said, "it's special orders. From Billy Dey, the big boss back in New York. Special coded message. And the ship behind us is probably that Sinjay commercial, the *Glorious Sun*, that landed on Mars just after we did."

"But," Anne expostulated, frowning, "why should an Oriental Earth ship be following a space-trotting reporter and his family out after a mere story for his column?"

Jim Abbott's smile was quizzical.

"Mere story?" he said. "We're looking for Bill Morgan."

"Bill Morgan? The scientist lost in space six months ago?"

ABBOTT nodded.

"Billy Dey," he explained, "sent me a code message that a ham up in the Arctic Circle pulled in a message from him only four days ago. He's been getting a scrambled wave in that part of the sky at the same time every day for weeks. But he couldn't clear it up until he got perfect ether conditions. When he did get it, it was an SPM—space emergency—call from Morgan, saying that he had crashed at six miles' altitude, somewhere on Venus, and to look out for the echoes. That was all."

"It was so faint that it was the one and only time the ham was able to pick it up. Being a guy with an eye open for the main chance, he contacted the *Planet* and sold Dey the dope. Dey hasn't let a soul know. The message to me was in a special code."

"But shouldn't he have informed the government?" Lani asked. "Morgan was a government chemist, wasn't he?"

"Oh, he did that," Abbott said. "They said he was balmy. Said they'd have a patrol boat look around the

next time there was one in the neighborhood, but they weren't going on any more wild goose chases. Said Morgan was dead by now, or else lost in space. So that left Billy Dey free to detail us as a search party. It's a long chance, but if we can find him—and if he's alive—"

"What a scoop!" Lani exclaimed excitedly. "What a story! Space-trotting Abbott family finds missing chemist. Combs Venus' jungles and mountains at risk of their lives—"

"But," Anne said firmly, "I don't want us risking our lives. Not just for a story."

"Oh, we won't risk our lives," Jim assured her. "Actually, we'll just take a quick look for him, then go on to Polar City and get a real expedition organized. We have one clew to go on. 'Crashed at six miles,' Morgan's message said. Now, even though Venus has never been surveyed, there aren't many peaks on her six miles high. We'll cover all the territory we can, maybe sight the right one. Of course, if it happens to be on the nightside now, there's nothing we can do."

"But still," Anne put in doubtfully, "that doesn't explain why a Sinjay ship—"

The reporter's face went grim.

"Remember the rumors that went around just before Bill Morgan vanished from Mars? About his new formula for the direct conversion of sunlight into power, with no transformation loss?"

Anne nodded, and Lani listened wide-eyed.

"Well," Abbott told them, "the rumors were correct. Morgan was bringing that formula to Washington when he vanished. Venus was a long way out of his course. How'd he wind up here? Either he had an accident, or he was running from somebody who wanted to hijack the formula."

"But who?" Lani demanded.

"There's no proof. But the *Glorious Sun* was due in on Mars the day after Morgan left. And it was eight days late! Where was it those eight days? Control breakdown, was their story. But maybe they were chasing

Bill Morgan, huh? And lost him when he hit Venus and crashed? And maybe they're following us because they think we know where he is, and want us to lead them to him."

"But if the message was in code, how—" Anne began.

"All but the name," her husband told her. "The Yellow Federation has an active spy system. They may have learned of the message and put two and two together. But we've shaken them off and they'll never pick us up again in this mist. We're safe enough, hon."

HE TURNED back to the controls, but it was Lani who saw the rock loom up in front of them—a pinnacle, jagged and tortuous, that barred their path like an upraised sword.

"Use the nose vents!" the girl gasped, but Jim Abbott was already loosening all the underblasts simultaneously, giving the under nose vents full emergency.

They were so close when the blasts went off that Lani could see the yellow-green moss clinging to the sides of the rock ahead of them. But the blasts did it. They leap-frogged the *Sky-Hi* upward, literally hopping it over the peak. But there had not been time enough to fire through the safety-coordinator fire control especially designed to prevent any unbalanced application of power, and the sudden force exerted to lift the nose threw them over on their back and into the start of a power spin.

Only the fact that the instant the underblasts let go Jim Abbott killed the Benson spark saved them from crashing. As it was, the threatened power spin became a free end-over whirl toward outer space, with the long silver ship nearly out of all control.

When Abbott had the vessel under control again, bringing it cautiously back, the sweat was rolling profusely down his face.

"Golly!" Lani said succinctly, picking herself out of the safety netting around the walls. "I was really scared that time."

CHAPTER II

Flora and Fauna

ANNE got to her feet and rubbed herself gingerly.

"Your father—" she began to Lani when a shrill, excited voice behind her interrupted.

"What happened? Gee! Did we hit something?"

In the companionway entrance stood a boy in knickers, a round-faced, red-headed lad of fourteen, with a profusion of freckles that made his features look like a star map.

"Tommy!" Anne exclaimed. "Tommy Abbott! Where did you come from?"

The boy grinned.

"I—I stowed away," he gulped, with a sidelong look at his father. "Shucks, I don't wanna go to school. I wanna be a reporter, or go to Space Patrol Academy, like Johnny Danna, Lani's boy friend."

Lani flushed at the name of Johnny Danna.

"You deserve a good licking!" she cried. "You ran away from school!"

"Well, gosh," Tommy Abbott said, uneasy beneath his father's wordless gaze, "a guy can't go to school all his life. He's got to get out and—and meet life."

Jim Abbott's sternness broke down. And when he laughed, the boy knew he had won. "Then I don't hafta go back?" he asked eagerly.

"Not until we hit Mars again," his father promised. "Not," he added warningly, "that that let's you out of a licking as soon as I get around to it."

"Okay, Pop!" Tommy exclaimed exuberantly, and even let his mother kiss him before he rushed to the forward ports. "Gee, what hit that hill?"

They were creeping back toward the peak they had so narrowly missed, and this time saw the rugged upthrust of naked rock well before they reached it. But the peak had changed. The jagged finger of stone was no longer there. Instead, on the granite flanks far below debris were still

crashing and crumbling.

Jim Abbott whistled softly. "Our blast tubes blew the top off the mountain!" he said. "It was that close! But who'd expect to find a rock sticking in his face almost seven miles up?"

"Dad!" Lani exclaimed. "Maybe this is it! I mean, Morgan might have crashed the same way we almost did. This hill is *more* than six miles!"

The newsman nodded. "I was just thinking that. We'll drop down and see."

He maneuvered the *Sky-Hi* downward. At thirty thousand feet the peak leveled out into a rolling, rocky plain, utterly barren except for expanses of yellow moss or lichen, and curiously rounded shapes of all sizes that Abbott, after studying for a moment through the glasses, decided must be plants or fungi of some sort. They looked like overgrown mushrooms, and as they watched, one of the things moved.

"It's opening!" Tommy yelled.

And it was. With a motion like that of the iris of a camera lens, one of the fungi, at least a dozen feet in diameter, opened at the top until an ocher yellow maw six feet across yawned up at them. Then slowly it closed again.

"I think they're plants, but they might be animals," Jim said. "Make a sketch, Lani, for the column."

Lani got out a pad and pencil and sketched rapidly. Her father cut power entirely and let them drift as he scanned the rocks below through the glasses. But it was Tommy who saw what they were looking for first.

"Dad!" he whooped. "A wrecked boat! Over there—see?"

THE wrecked space-boat lay, a long slender one-man speedster, gleaming in the filtered sunlight, half-crumpled at the base of a rock.

"No dice," the reporter said after a minute. "No sign of life. But if Morgan is there, we'll find him."

The best place they could find to set down was in a narrow valley with sheer, hundred-foot walls. The floor was rocky, but they settled on a level

spot not more than four hundred yards from the wreck. They got down without any serious mishap, though at the last second an unexpected breeze shook them and the after end struck with a dull crash.

"She's buckled a little beneath the engine room," Abbott said, after an apprehensive look at the tell-tales. "But no damage done, thank the Lord. Now let's get over to that wreck and see what's happened to Bill Morgan."

He began hauling equipment out of the weapon chest.

"Tommy," he decided, "you carry the camera. Anne, hon, you and I will take a proton pistol and a radex rifle apiece. We won't need any suits because Venus has both a hotter and denser atmosphere than earth, and though the carbon dioxide percentage is higher and the nitrogen lower, it's been found generally safe enough anywhere except down in the jungles. Lani, you lug a couple of water bottles and some food concentrates. Also better pack a first-aid kit with restoratives."

"Shouldn't somebody stay with the ship?" Anne asked, but Jim shook his head.

"The Abbotts stick together," he said. "*Sky-Hi's* all right here, and we ought to be back and taking off within a couple of hours."

A minute later they were stooping to get through the outer door of the double port, and the round, vaultlike door was locking behind them with a soft hiss of compressed air.

The wrecked spaceboat lay on the plateau beyond the east cliffs of the tiny valley. They came out within a hundred yards of the wreck, and Tommy, clambering agilely up in advance of the others, let out a whoop.

"There she is, Pop! There—"

Then his yell changed to one of terror. He ducked and dropped, rolling backward in a tangle of arms and legs and camera, while past the spot he had been a black body hurled with a savage *clack-clacking* sound, like a piece of infuriated machinery.

The thing swooped over their heads and shot upward again. They had barely time to see a yard-long black

reptilian body, a fanlike tail, stiffly extended membranous wings and a snaky head with an open jaw in which serrated rows of teeth gleamed before it was gone, a black speck in the sky.

"G-gosh," Tommy said shakily. "I just stuck my head up and there it was coming at me. It almost—"

"Get down!" his father yelled. "Hug the rocks!"

They flung themselves down at the base of a huge boulder, and a second time the creature swooped past them, banked in bafflement close to the rock, and rocketed back upward.

"It's got wings, but it doesn't use them," Abbott observed calmly, prone in the rocky rubble. "Just the wing tips and tail to give it balance. It almost looked to me as if it couldn't use its wings for any thing but gliding—hey!"

"What is it?" Anne asked, startled.

"A glider! A Venus glider!" he whooped. "A petrified pterodactyl! A barracuda of the air that never lights except to lay its eggs and die! It eats on the wing, like a lunch counter customer. A flock of those things can strip you clean to polished bone in thirty seconds, each of them grabbing a mouthful as it goes by.

"Look, we've got to bag the thing—get its picture, anyway. Tommy, get the camera ready. It's heading back. I'm going to use the radex rifle on it. Try for an action shot as it swoops for me!"

"No, Jim!" Anne cried worriedly. "You can't—"

"It's no risk!" her red-headed husband told her jubilantly. "Imagine it! An action shot of me being attacked by a Venus glider! It'll be a smackeroo for the column."

HEEDLESS of her protests, he crawled out into the open and stood up. High in the air the glider was circling. It turned, and swooped downward again. Tommy had the camera ready in the shadow of the rock. Lani was busy scribbling down a sketch of the thing.

But something happened to the glider in mid-air. While it was still

a hundred yards away Anne, whose ear was the most sensitive of any of them, had the impression of a high-pitched scream, too high to be really called a sound. And with it the glider crumpled.

Its wings still stayed stiffly outstretched. But the reptilian head drooped. The fan-like tail closed. And the ugly beast plunged to the ground in a series of short, eccentric dives, like a kite.

Jim Abbott scratched his head.

"Now what happened to that thing?" he demanded, aggrievedly.

"I'll go find it, Dad!" Tommy yelled, swinging the camera over his shoulder. "I'll get a picture of it, anyway. I got it spotted."

Before they could grab him he was off, running between the boulders toward the rock behind which the glider had disappeared. In twenty steps he was out of sight.

"Tommy, come back here!" his father's voice ordered peremptorily.

"Okay, Dad!" Tommy called back over his shoulder. "Just a sec. I'm almost there."

He ran on another fifty yards and stopped. In twisting and turning between the rocks he had lost the one he had been trying to keep his eye on. Now they all looked alike.

"Tommy, come back here!" his father's voice repeated insistently, and the boy jumped, because it came from in front instead of behind him.

"I'm coming," he called back. "Where are you? I must have got turned around—"

"Tommy, come back here!" his father repeated in the same tones, seemingly just around the next rock, and the boy slowed, relieved.

"Here I am," he puffed. "Gee, I didn't think—"

He stopped, blankly. There was no one there—nothing save more rocks, and among them a thing like half an old baseball magnified to the size of a bushel basket, leathery-surfaced like an old gladstone bag, on the end of a squat trunk or stalk from which root-like appendages ran down down into crevices in the stone.

"Dad!" Tommy yelled. "Dad!"

The thing in front of him opened slowly, vast leathery lips on top parting to make a circular maw inside which the boy could glimpse an ocher-yellow membrane.

Slowly it tilted the gaping mouth toward him.

"Dad!" the thing called shrilly, in Tommy's own voice. "Dad!"

"We're coming, son!" Jim Abbott's voice came back.

But Tommy did not hear it. Something unseen and impalpable hit him. Every nerve in his body went suddenly as tight as an overstrung violin string, and then they all seemed to break at once. A black curtain swooped down on him, and without making a sound Tommy crumpled as the thick stalk of the creature began to extend and the bulbous head came closer and closer to him.

TOMMY opened his eyes to see first the frightened face of his mother bending over him.

"Tommy!" she half-sobbed. "Tommy! Are you all right?"

"Sure, I'm all right," Tommy muttered. "Only, gee, but I feel funny."

He turned his head. The leathery creature that had spoken to him in his own voice was an ugly crumpled thing like an old chamois cloth, half a dozen feet away. Grimly his father was putting the radex rifle back into its stubby waist holster.

"What happened, Tommy?" his father asked grimly. "We heard you yell."

"And when we got here that—that thing was bending over you," Anne choked. "It was going to swallow you—"

"Only Dad gave it something less digestible," Lani put in severely. "Tommy Abbott, how often do we have to tell you you can't go running off by yourself? You ought to have a good licking. If you hadn't run away from school in the first place—"

"But it was calling me," Tommy said defensively, standing up, a little wobbly, and taking a cup of water his mother poured for him. "It was calling to me, Dad, in your voice. And then—then when I already yelled for

you it yelled for you, too!"

Jim Abbott arched his eyebrows at his wife.

"It called you, and then me?" he asked casually. "Don't you think you were hearing echoes from the rocks and got confused, Tommy?"

The boy shook his head with stubborn insistence.

"It echoed us," he said, and threw out the remainder of the water in his cup.

"Jim—" Anne began, but the newsman interrupted her.

"Holy moon cats!" he exclaimed, and grabbed the front of Tommy's leather jumper, jerked the boy toward him. At Tommy's feet the pale yellow moss that covered the rock was writhing and frothing where he had thrown the water. Like effervescing salts it boiled upwards in a thin geyser that suddenly whipped out and tried to clamp Lani about the waist.

The newsman jerked the radex rifle free and used it for the second time in as many minutes, and in the blue aura from the short muzzle the yellow arm jerked frantically and withered away.

Gingerly they backed away from the patch of moss, blackened and quiet now, to naked rock.

"Psuedo-moss!" Lani cried excitedly. "Dad, you remember there's a description of it in Stormson's book. Only he was describing something he found on Mars. It imitates natural lichen, but it's really colonies of billions of one-celled animals. They're dormant in the absence of water, but in the presence of moisture they become fantastically active as they unite to seek food under the control of sort of a mass brain."

Her father grinned and whistled gently as he looked around them. All through the rocks and across the plateau were spread patches of the false-moss, some of them hundreds of square feet in area.

"They came to life that much on half a cup of water," he commented. "And it rains here when the twilight wind comes. This must be a nice spot to be when evening on Venus starts settling down. I think we'd better snap into it and get over to Morgan's

ship. Evening isn't as far away as I'm beginning to wish it was."

CHAPTER III

The Echoers

WITH Abbott in the lead, they threaded their way through the rocks toward the little declivity in which the wrecked spaceship lay. They were within a dozen yards of the rim of the depression when Abbott stopped suddenly.

"Listen!" he whispered. "I hear footsteps."

They were all silent, and clearly they heard footsteps coming toward them from around a boulder directly ahead. They waited, and Jim Abbott had his proton pistol ready, but the steps, though they continued, seemed to get no closer. Jim turned puzzled eyes toward Anne.

"I'll go ahead," he said. "There's something darn funny about those footsteps."

"Jim, do be careful!" Anne begged.

"I will," her husband promised grimly, and stepped softly around the rock. Then he stopped. Ahead of him was another of the oversize mushroom-like creatures that had come so close to engulfing Tommy. This one was a half-hemisphere the size of a smallish elephant, on a trunk four feet thick. The maw on top was stretched tautly open, revealing inside a greenish membrane that vibrated gently.

"Listen!" the thing whispered confidentially to the newsman, in his own tones. "I hear footsteps. I'll go ahead. There's something darn funny about those footsteps."

Then instantly in Anne's voice it answered itself.

"Jim, do be careful!"

Then the sound of footsteps came again, clearly originating within the gaping mouth of the plant.

Jim Abbott hesitated, and the great head began to weave a little back and forth on its stalk. It rose tentatively upwards and bent toward him. He

stopped hesitating and backed away.

"Okay, pals," he whispered to his family, keeping his voice down lest the monstrous mushroom ahead hear him and start whispering back. "Let's get out of here."

He hurried them away, skirting the thing at a safe distance.

"I apologize, Tommy," he told the boy. "You were right. Those things do echo. It was echoing our footsteps. And it echoed our whole conversation right back at me, Anne. Thought it was luring us closer, I suppose. My guess is that thing inside its mouth is a tympanic membrane. Some kind of a sound-reproducing organ that lets it repeat any sound it hears. When another creature approaches, it echoes that creature's noises as if it were one of the species, lures its prey to it that way. But that doesn't explain what knocked Tommy out, or what brought down that glider."

His speculations were cut short by the sight of the wrecked ship directly ahead of them. After Tommy had taken half a dozen shots from different angles with the camera, they approached to make a quick inspection.

The ship was thoroughly wrecked. The nose was crumpled, and the tail sections had cracked loose from the body. There was no one inside, living or dead, but some one had removed most of the furnishings and tools, and had stripped the alaplak skin from the tail structures.

These were nowhere around. But fifty yards in front of the smashed nose of the craft was a dark opening in an uprising rock wall. And in a little niche beside the cave mouth sat one of the echoing mushrooms with which by now they were becoming quite familiar. This one was no larger than a Pekingnese dog and was reddish in color, as if to match the red clay color of the rock behind it.

They approached the cave—and the plant—with caution, and a dozen yards away Jim Abbott raised his voice.

"Morgan!" he called. "Bill Morgan!"

At the sound the echoer stirred then and opened. It rose on its stalk

to a height of a couple of feet and suddenly called out, "Morgan! Bill Morgan!"

Then in a new voice it answered itself.

"Hello," it said to them pleasantly. "This is Morgan speaking, with my good friend Cerberus doing duty as my voice by proxy. Sorry I couldn't be here to greet you, but I got tired of waiting. My supplies are all gone, and none of the flora or fauna of this place make good eating.

"I'm going to try to make it through to Polar City tonight when the wind comes up. It'll be tricky, but I have hopes. Inside, you'll find some of my little playmates. Maybe they'll amuse you. They've helped me kill time, and I've had some fun with them. If you're friends, I've left a message for you. If you're enemies—that is to say, if you're the bunch of Sinjap bandits who chased me here—phooie to you. You'll never learn the formula in a million years. That's all, except you might feed my friend Cerberus. Anything will be appreciated. He is not particular."

Then the Venusian mushroom fell silent, as if waiting.

"Toss it a protein biscuit, Tommy," his father suggested, and the boy took a cracker from his pocket and tossed it expertly into the open maw. The thing closed up and was quiet, except for little ripples that ran across the leathery outer surface.

Anne stared at Cerberus with a little frown on her brow.

"You know," she said suddenly, "I think one of those might come in very—"

But as usual she was not allowed to finish her remark. Lani broke in with:

"Dad! Professor Morgan as good as told us he left his formula inside for us to find. But how do you suppose he—"

"Plans to get to Polar City from here, three thousand miles across primordial jungles and swamps?" her father finished, his face perplexed. "Lord knows. If there's a way to do it, though, he'll have thought of it. He's the only scientist I ever knew with a sense of humor. Well, let's see

what he's left inside."

They had to stoop to get inside the cave, but once in, found themselves in a space that must have been at least fifty by a hundred feet in length, roughly arched overhead. The newshound punched on a pocket lumi-lantern that flooded the cavern with light, and Anne and Lani gave excited little screams.

The whole interior, walls, floor and overhead surfaces, reflected the light back to them in refulgent colors, in great bands and splotches of crimson and golden yellow, blue and green and purple, all of them shifting and changing through the spectrum like an earthly color organ going full blast on a Wagner battle hymn.

"Spectrum moss!" Jim Abbott exclaimed. "A true moss this time, and harmless. It's transparent, and has a mineral-like crystalline structure. The cells break light up something like the facets of a diamond do, and since they are all slowly but constantly shifting in position in relationship to all the others, the colors keep changing. Too bad it has to have special care to ship it. The stuff is worth a thousand dollars an ounce back in New York."

But it was Tommy, who was interested neither in the beauty nor the value of the spectrum moss, who made the first discovery.

"Dad!" he said. "Listen. I hear somebody talking."

Anne and Lani quieted, and in the silence they all heard the voice, off to one side, speaking in low but clear tones.

"SPM, all stations. SPM all stations. Bill Morgan calling from some place on Venus. I'm wrecked at six miles. Please send help. And look out for the echoes. Look out for the echoes."

"Bill!" Jim Abbott exclaimed. "Bill Morgan!"

HE beamed the lumi-lantern in the direction of the voice, and this time got back only a subdued reflection of scarlet and yellow. Square in the ray was a radio transceiver in a niche twenty feet away, a standard portable job that must have come from

the wrecked speedster.

It was all set up for transmitting, but there was no operator. Nothing but a scarlet fungus as big around as a dinner plate, nodding on a lissom stem from the crevice in the rock, its open maw a dozen inches away from the transceiver mike.

"SPM, all stations," the thing was saying quietly into the mike. "SPM, all stations. Bill Morgan calling from some place—"

"Hell!" the newsman said in disappointment. "Just another talking toadstool!"

He strode over toward the set, and the echoer abruptly closed up and retracted its neck. Tommy and Lani followed him. As they approached the set, some automatic control operated and threw the main switch to open.

"Morgan set it on automatic control before he left," Lani suggested. "And look. For some reason he's rigged up a buzzer connected with the closing switch. Wonder why."

Tommy, before he could be told not to, closed the open switch, and the little buzzer that had been attached to the control panel rattled feebly. Instantly the echoer that had withdrawn at their approach extended itself, wavered uncertainly for a moment, and then opened.

"SPM, all stations," it began. "SPM—"

Then it hesitated, swung back and forth questingly, and visibly tensed the tympanic membrane inside its open mouth.

"Tommy!" Jim Abbott cried out in warning. "Lani! Duck!"

The boy and the girl dropped to the rocky floor beside him. The echoer quivered soundlessly, and for a fleeting moment all three felt as if touched by an invisible rasp that plucked their nerves taut and almost paralyzed their breathing. But they were all outside the range of whatever curious force it was the echoer was emitting, and only the instrument board of the radio received the full force of the plant's deadly attack.

The plasticon panel exploded into a thousand splinters. The glass over

the meters powdered into dust. Taut wound coils inside the board burst with a high twanging.

Then the round head began dropping, searching for them.

"Anne!" Jim Abbott yelled, as suddenly he understood. "Stay clear of it! *Supersound!*"

He was grabbing for his proton pistol even as he cried out, but it was Anne who acted first. She threw what she had in her hand at the moment, and it happened to be her powder puff, well saturated with *Glamorous Night*.

The powder puff described an arc and dropped neatly into the echoer's circular throat, and instantly a fine, fluffy cloud of talc filled the unappreciative interior of the thing.

The echoer stopped abruptly in its weaving search for its victims and coughed, loudly and explosively. The powder puff shot out again, and Jim caught it. But the mushroom kept on coughing, violently and indignantly, for a good minute before it closed up and withdrew sulkily into its niche.

"Thanks, hon," Jim said, his voice sober as he got to his feet and handed the puff back to Anne. "I'll never laugh at you again for fixing your face when it doesn't need it."

LANI scrambled up, and the girl's face was pale.

"So that's it!" she exclaimed. "That is how they bring down their prey."

"Supersound? Yeah," Jim nodded. "I should have guessed. That taut membrane, with the gullet behind it closing in a parabolic curve, should have told me at once. Especially after we found out the things used audible sound to lure their food within range. Then, when it's close enough, they step up the vibrations and emit a nice little blast of supersound, all focused and directed just where they want. Must destroy the nerve system. Cute little creatures, aren't they? Maybe this one might not have been powerful enough to kill us. But I'm just as glad the matter wasn't put to a test."

"Gee," Tommy said, "Professor Morgan left it there to send out his messages for help, didn't he? And

the buzzer was a signal. Every time it went off, the darn old mushroom was supposed to call for help, huh?"

"Conditioned reflex," Lani agreed absently.

Jim Abbott drew a long breath and let it out in a sigh.

"I'll have a hot time," he complained wryly, "using any of this in my column. The good old *Planet's* readers will take a lot, but I'll bet they draw the line at the idea of a missing scientist training mushrooms to answer the door, radio earth every hour on the hour, and for all I know, do the cooking and sweeping and put out the cat. Which suggests that we might look around and find out what other surprises Morgan has left for us."

They made a full circuit of the cavern this time, without any more interruptions, and found that the rear of it had been fitted up with equipment taken from the wreck outside. The light alaplaf furniture had been carried in and arranged in a corner—a bunk, table, chair, and a work bench improvised from shelves. There were metal trimmings and filings and odd bits of junk around, indicating that the missing scientist had been actively engaged on some kind of work with the alaplaf ribs and plates he had removed from his ship.

A crude stove constructed out of parts taken from the motors of his speedster, probably burning Benson fuel from the blast tubes, told how he had combated the cold of the month-long nights. And a metal door taken from the wreck had been arranged so that it would close the cave entrance securely, thus giving the scientist security, warmth, and comfort. And of course he had had a supply of food concentrates from the ship's lockers.

But there were no papers, no notes, no messages of any kind indicating what he had been building, how he had left, or giving the important formula that he—or rather the echoer Cerberus speaking for him—had hinted he had left behind.

The three older Abbotts stared at each other blankly.

"No message that I can find," Lani remarked.

"Me, either," her father muttered. "Now what the devil kind of message would it be that a friend could find and an enemy couldn't? And that even a friend might not find?"

"Code?" Lani suggested.

"Maybe," Jim Abbott said. "But where is it?"

"Hey, Dad!" Tommy yelled from the end of the cave. "Here's more echoers."

He had been poking around all by himself, climbing up on rock fragments to peer on top of a rocky shelf. Now he was flashing a lumi-lantern over a rock shelf a little higher than a man's head. As he called out, the half-sphere of an echo plant suddenly reared in his face and he tumbled down with a shout. The echo plant swayed back and forth, and beside it another extended itself.

"I'm Pete," the first echoer announced gravely.

"I'm Repeat," its companion added in a sober tone.

"Mr. Morgan is not here," said the first.

"He told us to tell you."

"In case Cerberus forgot."

"He took off for Polar City in a glider."

"He built it himself. He thought if the Venus gliders can go entirely around the planet on the evening wind—"

"—he might stand a chance of reaching safety."

Having said that much in alternate sentences, Pete and Repeat were silent.

CHAPTER IV

The Sinjaps

JIM ABBOTT raised his eyebrows at his family.

"What a story!" he exclaimed. "And who'll believe it when I tell them about this troupe of trained fungi spouting information dinned into them by a vanished scientist who—say!" The last word was a yell. "Look!" he cried. "Maybe Morgan

left the formula *with one of these echo plants?*"

"Of course, he did!" Anne agreed. "I would have."

"But," Lani objected, "if he left it for an echoer to repeat, anybody, friend or enemy, Sinjap or not, could get the formula, and—"

"Formula," Pete interrupted.

"Formula!" Repeat chimed in.

"The Morgan Minstrels—"

"—will now oblige."

Pete and Repeat whistled piercingly. Seven more echoers reared their heads above the rocky shelf. Seven heads nodded and swayed on their stalks. Seven maws opened, and startlingly, the seven began to sing, all in a pleasant masculine basso.

"Mary had a little lamb," they sang, "little lamb, little lamb, Mary had a little lamb with fleece as white as snow."

In the light that Tommy turned on them, the rock behind the echoers glowed and pulsed with changing color. As the colors flowed across the rock, the colors of the plants changed to match it. Open-mouthed the Abbotts stared until the childish song had ended, and the seven echoers were silent again.

"And now a game!" Pete said brightly, then.

"It's loads of fun!" Repeat chuckled.

"Adam and Eve and Pinch-Me—" began the first echoer in the line of seven.

"Went out to sea—" the second chimed in.

"On a raft!" the third burst out.

"Adam and Eve—" number four chortled.

"Fell off and drowned!" the fifth told them lugubriously.

"Then who was left?" asked the sixth solemnly.

"Pinch-Me," the seventh of the echoers cried out, and instantly they all burst into loud, raucous laughter.

"There!" Pete cried proudly.

"Wasn't that fun?" Repeat asked.

Jim Abbott took out a handkerchief and mopped his brow gently.

"Do you suppose," Anne asked anxiously, "that Bill Morgan went crazy?"

"Lord knows," the newshound muttered gloomily. "Teaching nursery rhymes to lethal mushrooms on a Venus mountain peak doesn't exactly make sense and logic, even for a man with a sense of humor. Anyway, you're wrong, and Lani's right. If one of those things knew the formula, there's no way he could keep the Sinjaps from getting it too. So—"

"Don't you want to feed us now?" Pete broke in.

"We're always fed afterwards," Repeat told them.

"It helps us remember."

"And keeps us safe."

Tommy dug a handful of protein biscuits from his pocket and tossed them into the expectant maws. The echoers caught the crackers like a troupe of trained seals and closed. All nine of them vibrated gently, little tremors running down their stalks.

Anne Abbott stared at them.

"Just the same," she said, "if I had one of those things I'd—"

BUT her husband and daughter had turned away and were rigging up the camera and lights to take some snaps of the interior of the cave. Tommy was wandering around muttering something to himself. He caught his mother's gaze on him, and his expression became one of the utmost innocence.

"Going outside, hon," Jim announced over his shoulder, turning toward the entrance. "Going to search the wreck again. Since Morgan left no message here, maybe he left it there. Won't be long, because whether we find it or not, we'll have to be running soon. It's getting awful close to twilight."

"Twilight!" Pete said suddenly, popping up as if the word was a signal—which, for all they could tell, it might be.

"When the shadow falls from yonder tower—"

"And Big Ben makes the welkin ring—" put in Repeat.

"Beware the coming of the danger hour—"

"And the hungry host upon the wing!"

Having finished this cryptic utterance, they waited until they got their biscuit, then withdrew again into motionless silence.

Jim Abbott and Lani stared at each other.

"Make any sense to you?" the man asked. The girl shook her head.

"Nothing," she confessed. "No more than the nursery rhymes did. Except that it seems to be some kind of a general warning."

"Anyway, it helps add to the general confusion," the newshound remarked, laconically, unaware of how close to the truth he was.

He and Lani went outside. Anne hesitated a moment.

"Tommy," she asked, "what were you saying just now?"

"I was just repeating what the mushrooms said," Tommy answered guilelessly. "Adam and Eve and Pinch-Me went out to sea on a raft. Adam and Eve fell off and drowned. Then who was left? Who was left, Mom?"

"Pinch-Me," his mother answered, and then shrieked indignantly. "Tommy Abbott! I'll tan your hide until you can't sit down!"

"Aw, Mom!" the boy protested, beating a hurried retreat. "I didn't hurt you. It was just a little pinch. And you told me to, didn't you? You said, pinch me! Don't you see, Mom? It's a game! Heck, I used to play it on the other kids when I was little."

His mother's indignation vanished, to be replaced by a thoughtful look.

"Yes, I remember now, Tommy," she told her son. "It's very old, like the Mother Goose stories."

"Huh!" Tommy said inelegantly. "I don't think this Morgan guy was a scientist at all. I think he was just screwy."

"Go out and see if you can help your father, Tommy," Anne directed. "I have something to do in here."

When the boy had gone out into the waning Venusian daylight, Anne Abbott clambered up on the little rocky step which would enable her to reach the row of echo plants Morgan had trained and left there for a purpose she thought she now understood.

It was the last of the nine she wanted to reach, the one that had said, "Pinch-Me." She touched it, and the half-hemisphere of its head was firm and leathery under her fingers. Decisively she pinched it.

Immediately the echoer extended itself. Its maw opened.

"I'm Echo," it announced clearly. And then it spoke slowly and carefully for a full minute. When it had finished, it waited expectantly. Anne found some chocolate squares in the knapsack over her shoulder and dropped one into the waiting orifice. Echo closed, and trembled on its stalk with agitated joy.

ANNE acted swiftly. Outside Jim and Lani were calling to her, their voices tense with excitement. She lifted Echo down from the shelf of rock, a little apprehensively. But nothing happened save that a dozen little fingers on the end of the stalk, like roots, waved excitedly for a moment and then curled themselves up. Echo, when not extended, was not much bulkier than a baseball, and she wrapped him in a handkerchief.

His maw began to open again, and hurriedly she popped in another piece of chocolate. Echo relaxed, apparently content, and she popped him into her knapsack and snapped it shut. Then she ran out to answer her husband's calls.

He met her at the mouth of the cave. And at his expression swift fear gripped her.

"Jim!" she gasped. "What is it?"

"Tommy!" Lani was calling. "Tommy!"

The boy was picking something from a crevice in the rocks twenty feet away, but he came quickly. Anne saw that he had a whole handful of echoers, scarcely larger than silver dollars, which he had dumped into an empty food tin from Morgan's rubbish heap.

"Anne!" Jim Abbott told her quietly, as Tommy scuttled past them. "They've followed us. They must have landed while we were inside. They're coming up the cliff now. Sinjaps, and they're armed. We're going

to have to make a fight for it."

"Can we?" Anne asked, a little pale, but calm now that danger was really on them.

"We have the Radex rifles and the proton pistols," Jim told her, his voice grim. "And we can hold out here for a while, anyway. The door Morgan rigged up is alaplatt metal and will stand up against any ordinary hand weapons. And it's almost twilight. If we can hold out until after the sun sets, we'll have a little respite—from the Sinjaps, anyway," he added wryly.

"Gee, Dad!" Tommy shrilled excitedly. "Couldn't we set a trap with a lot of echoers and let 'em run into it, and let the echoers supersound 'em?"

"I don't know how they followed us," the newsman went on, not heeding the boy. "Unless their detectors picked up the crash when we blew the top off the peak. As soon as we saw their ship, I took a look and saw them just starting up the cliff—six men, all armed. They'll be here any second. Have your gun ready, hon."

He turned to peer outward, and Anne, at his side, followed his gaze. Tommy and Lani huddled close as they all watched the clearing outside with the dark gray of Venus twilight pressing in toward it.

Already the evening wind was rising and moaning fitfully among the rocks. Distantly lightning split the sky, and thunder growled. The sunlight that diffused through the thick atmosphere cast long pale shadows. As they watched, the creeping shadow of the pinnacle of rock above them fell across a giant boulder down by the wrecked spaceship, and the thing stirred uneasily, to reveal itself as a monster echoer, pitted and corrugated by age to the texture of granite.

Then they heard footsteps, before they could see the invaders. The footsteps came, queerly, from directly in front of them, and it took a moment to realize that what they were hearing was an echoer's repetition of steps coming from the direction of the valley.

A moment later half a dozen men emerged cautiously into the open, forty yards away. They were short

and squat, and wore modified light safety suits with globular crystal headpieces. All carried Radex rifles at the alert.

THOUGH their faces were obscured, the stature of the Oriental was unmistakable. The six came to a halt, staring at the wreck of Morgan's speedster, and then whirled. Jim Abbott stiffened. Coming from the edge of the clearing was a voice that had attracted their attention—his own voice.

"Listen, I hear footsteps!" it said loudly. "I'll go ahead. There's something darn funny about those footsteps!"

And then in Anne's voice, "Jim, do be careful!"

"The echoer we almost ran into!" Lani breathed. "It's trying to trap them! The sound of their footsteps aroused it, and it's repeating the last thing it heard."

The party of Sinjaps conferred for an instant, then spread out and advanced swiftly toward the rock from behind which the words had come.

They were a dozen yards from it when the echoer shot up above the stone, maw gaping wide like the mouth of a tunnel. The leading Sinjap brought up his rifle, but before it spoke the echoer turned toward him, the other tympanum tensed, and invisible death spewed out at him.

The crystal helmet shattered. The Sinjap with the lifted gun, and his nearest companion stiffened, threw up their arms in a posture of unendurable agony, and collapsed. The echoer swayed downward toward the prone bodies, but the blue flame of a Radex rifle reached it first. The great leathery head shriveled and blackened and crashed with a soggy, squashing sound to the rock beside its victims.

The four survivors ran forward, and as they stooped over the two contorted figures on the ground, the mammoth echoer in the shadows down by the wrecked ship set up a bellow.

"Twilight!" it cried, in a basso that rumbled like an echo of thunder among the boulders. "Twilight!"

Time to close the door, Mr. Morgan!
Time to close the door!"

The Sinjaps jerked up abruptly. For a moment the Abbotts, too, were startled. Then:

"Big Ben!" Lani exclaimed, her eyes wide at her discovery.

"So that's what Pete and Repeat meant!" her father added. "A living alarm clock!"

Big Ben was silent for a few seconds.

Then as the group of Sinjaps stared at him in evident stupefaction, he began to sing lustily.

"Just a song at twilight—" he roared out gustily, "when the lights are low—and the flick'ring shadows—softly come and go—"

Recovering from their momentary amazement, the four men in the clearing raised their rifles. But before the blue Radex bolts could silence the grotesquely singing plant, the "flickering shadows" of a Venus twilight descended upon them—the first of the vanguard of gliders that rode the evening wind around the planet shooting down out of the sky straight at the foremost Sinjap.

The attack missed, and it banked and was gone again too swiftly for a Radex bolt to bring it down. But it had scarcely swooped upward before a dozen more of the ugly black bodies plunged downward together at the little band, like twelve clacking furies out of hell, toothed jaws snapping wide.

The four Sinjaps stumbled backward, endeavoring ineffectually to bring their rifles to bear on the fleeting gliders, and one of them fell. For an instant he was the focus of a stream of black that poured down out of the sky and back up into it without a break.

The three others broke and ran, leaving him to his fate, and almost between two breaths the attack was finished. The gliders had stripped the Sinjap to bones in a dozen seconds. The man's crystal helmet was rolling crazily across the uneven ground, and where he had been was only a huddled heap showing a ghostly white in the twilight.

CHAPTER V

The Morgan Formula

ANNE gave a little gasp, and Jim's hand rested steadily on her shoulder. The gliders were now attacking the transparent helmet that had kept the Sinjap's head intact, their jaws slipping off its crystal surface and infuriating them.

Under their attack the round object bounced in horrifying fashion out of sight, and the descending cloud of death moved away, the clack-clacking diminishing in the distance. Half a dozen blue flashes flickered against the sky. A score of gliders began a lifeless downward plunge.

Whether the three Sinjap attackers had got safely back to their ship or succumbed to the gliders the Abbotts had no way of knowing. The windy twilight outside was now a swarming maelstrom of gliders. Lightning was flickering almost interruptedly, and the crash of thunder over the peak was a steady drumming. Across the clearing among the rocks, here and there the heads of ancient and gigantic echoers rose, swaying on thick stalks, maws gaping open for the gliders that came within their range.

Then came the rain, in a crashing deluge from the sky. And with the first drops, the whole ground surface outside came terribly to life. The yellowish pseudo-moss began to roll and ripple, like the agitated surface of a pond. It rolled up higher and higher until as the rain increased it was surging and boiling in an excited frenzy like liquid in a cauldron about to overflow. The gliders swooped down at it, feeding voraciously, but still it rose higher and higher. Great yellow arms flung themselves loopingly into the sky, here and there enclosing a glider and bringing it down. The gliders continued their attack, and hundred-foot sheets of pseudo-moss flung themselves upward like nets to trap them.

The wind, rising in velocity, moaned and howled across the plateau. The lightning seemed to be trying to

rip the mountain apart. And through it all the savage struggle for existence went on unabated among the Venus creatures outside the cavern.

"Suffering Siamese cats!" Jim Abbott muttered, and slammed the barrier door shut just as a tongue of psuedo-moss began to creep into the opening. He barred the door and wiped his forehead feebly.

"Twilight on Venus!" he muttered. "The star of evening! Such a happy homelike time. Such a peaceful period of the day! Just the hour to be ushered in by a misbegotten mushroom the size of a house singing 'Love's Old Sweet Song'."

Anne could find no words, but Lani was smiling.

"I think I'd like to meet this Professor Morgan," she said. "He has an interesting sense of humor."

"Gee!" Tommy said, wide-eyed, and for once in his life was completely unable to add anything to the remark except an explosive, "Gosh!"

Anne drew a deep breath, and then managed a smile.

"Anyway," she said, "I'll bet the Sinjaps have forgotten us for the moment."

Her husband squeezed her hand.

"It's a tight spot, hon," he said. "But the Abbotts never say die, do they?"

"Never," Anne told him fondly. "We've been in other tight spots and got out of them. You and Lani go ahead and think us out of this one. I'll fix something to eat."

She began to rummage around in the emergency kit they had brought from the ship, and found some concentrated soup and protein biscuits. She punctured the cans of soup, let them self-heat, then turned them out into bowls she found among the equipment Morgan had left behind.

WHEN the meal was ready she looked around. Jim and Lani had disappeared, and she could hear their voices coming from a narrow, dark passageway that ran back into the rock from the end of the cavern. Tommy was in the middle of the rocky floor, playing some kind of game with

himself. She could hear him murmuring hoarsely.

"All right, men! Surround 'em! Blast 'em down! Give 'em no quarter!"

She saw that he had dumped out the can full of tiny echoers he had gathered and had them lined up in rows, was feeding them crumbs of protein biscuit.

"Tommy!" she said. "Dinner. Jim! Lani!"

"Coming!" the girl's clear young voice called back, and she and her father emerged into the light.

"We found an opening in the rock," Jim told her, as they sat down to the soup around the missing Morgan's work table. "The crevice goes all the way to the cliff wall. There's an opening about two feet wide. Morgan had it closed with a sheet of alaplat. We looked out."

"It's still raining heavily," Lani took up the story with eagerness. "But the lightning and thunder are dying, and the flight of gliders seems to have gone on. The wind isn't as strong, either. I have an idea the rain and the wind both will pretty near die away in an hour or so, don't you, Dad?"

"Should," the newshound said tersely. "And it's only twenty feet from the opening down to the fault we came along up the cliff. That means the *Sky-Hi* is only two hundred yards from us now. We couldn't see any guard around the *Sky-Hi*—I imagine they're all staying safe inside their own ship until things outside quiet down a little."

"Then if we could only get to the *Sky-Hi*—" Anne began eagerly.

"That's what they're expecting us to try," Jim cut in. "And they're ready for us. They have a navigation beam on it, lighting it up so that if we try to reach it, we'll be seen and they can beam us down. Also, unless they're dopes, they probably have it covered with a knock-out ray as well."

"Heck," Tommy said contemptuously. "Just a bunch of Sinjaps! Why, gee, I could scare 'em off all by myself, I bet. You know what I'd do, Pop? I'd just sneak up close and plant a bunch of—"

"We could get down to the trail through the opening in the rock," his father said thoughtfully, and Tommy, his excited outburst ignored, retired into hurt silence. "We have enough rope in the emergency kit. That would keep us from having to cross any stretches of psuedo-moss, which probably won't calm down for a good many hours yet. We could get within fifty yards of the ship safely. Then if we could only draw their attention away, somehow make them shift those beams while we got inside—"

He got up and took a dozen paces, restlessly, turned back.

"If we—" he began, and froze as a voice behind him rasped shrilly.

"Stick 'em up, guy! I've got you covered. Close in on him, men!"

For an instant Jim Abbott stood rigid. Then very carefully he moved the foot that had brushed over one of Tommy's baby echoers, and looked down. The echoer was truculently upright on its stalk, ineffectually using its weapon of supersound on his ankle.

"Hey, Dad!" Tommy protested. "Look out! I've been training 'em! Don't step on them!"

His father stared at him, his mouth open.

"Say!" he exclaimed inelegantly. "There's an idea!"

"Sure," the boy told him, while Anne and Lani exchanged quick puzzled glances. "That's what I was trying to tell you, only you wouldn't listen. If Professor Morgan could make 'em sing songs, I guess we could train 'em, too, couldn't we?"

SHIVERING with nervous excitement, her heart pounding with a queer thudding, Anne Abbott crouched in the steamy darkness at the base of a boulder and peered at the *Sky-Hi*.

Their ship stood where they had left it, only fifty yards away, a great silver cylinder towering into the night, the lower half brightly illuminated by the search-beam from the enemy's ship a quarter mile up the valley.

Beside her Lani was tense, too, but watchful, listening.

"Don't worry, Mother," she said. "They'll pull it off. All we have to do is to keep the Sinjaps puzzled for a couple of minutes, so that they take the beam off for that long."

"But," Anne objected, "we exhausted the proton pistols—"

"Had to," Lani said briefly. "Teaching the echoers the sound. Listen carefully, and be ready. It should only be a minute now."

Up on the cliffs, Jim Abbott and Tommy were feeling their way along a ledge that was luckily broad and fairly smooth. The rain had ceased half an hour earlier. The last two hours had been filled with effort. But now they had a chance. An outside chance.

They had descended through the crack in the rock he had found, all four of them, and had left Anne and Lani stationed just outside the range of the Sinjap beams. Now he and Tommy were going to launch an attack on the enemy.

"Careful, son," he whispered, as Tommy stumbled, and helped the boy up.

Aided very slightly by diffused light from the beam that cut the darkness to light up the *Sky-Hi*, they moved along the ledge until they were opposite the Sinjap ship. They were none too soon. A crack of light appeared in the valley below, at the base of the K-1 spaceboat, and expanded into a bright circle of illumination. The figure of a man, bright against the light, emerged from the open port, followed by a second and a third.

"Okay, son," the newshound announced. "This is far enough. Got your men ready?"

"All set, Pop."

"Then spread 'em out along the cliff. The way we decided," the man directed, and the boy ran ahead a few yards, began dropping small soft objects along the ledge.

His father set down the heavy knapsack he had been carrying over his shoulder—a sack that from time to time squirmed restlessly—and lowered the two Radex rifles slung from his shoulders to the ground. Then, a dozen yards apart, he wedged them

butt first into crevices.

Tommy came scrambling cautiously back toward him.

"They're all excited and ready to go!" he whispered. "Hear 'em?"

There were a few scattered preliminary popping sounds in the darkness—the familiar noise of a proton pistol in use. Jim Abbott ripped open the mouth of the bag he had set down. In it were all the echoers that had been in the cave—Pete and Repeat, the twin comics, the rest that had been on the shelf with them, and the larger echoer that had been stationed at the radio transmitter.

He and Tommy and Lani had put in an intensive two hours training them all, including the several dozen tiny plants Tommy had gathered, and now he was praying that the training would bear fruit.

The reporter took the sack of excited, irritated echoers by the bottom and held it out over the face of the cliff. He shook, and the indignant plants tumbled out and downwards in the darkness, rolling down the steep pitch of the cliff.

Then he stooped over first one, then the other Radex rifle, setting them on automatic fire.

"Okay, Tommy!" he said, and took the boy's hand. "Run!"

THEY ran, and behind them all the bedlam of battle broke out. The two rifles were snapping blue bolts impressively into the air. The small echoers Tommy had scattered along the cliff were rattling and popping like a hundred proton pistols. They had used every charge of ammunition they had to teach them the sound, and now the plants in their excitement were reproducing it to perfection, so that the night resounded to salvo after salvo of sham fire.

Down at the base of the cliff, the nine large echoers were confusedly filling the darkness with the shouts and shots Jim Abbott had spent an hour teaching them, with frequent feedings of biscuit crumbs as incentive.

"All right, men! Close in on them!" a stentorian voice was roaring in the

night. "Beam them down! Don't let one escape! Spread out and keep under cover! Rush them now, rush them!"

Other voices were joining in with the yells, and through them rang the steady high-pitched popping of scores of proton pistols.

Running, Jim Abbott got just a glimpse of hurrying figures at the base of the enemy ship as the men who had emerged scurried for safety. Then the beam that had held the *Sky-Hi* lifted, swung around, flashed across the cliffs to play on the spot where the sounds were coming from.

A proton cannon began barking with deep, abrupt coughs in the Sinjap ship. Through the deep explosions of the cannon came the high, rising and falling whine of a Jorman induction heater, which could roast a man even in an insulated suit in six seconds.

Jim Abbott grinned as he ran. As the Sinjaps answered the mock fire directed against them, the excited echoers picked up the new sounds and hurled them back with magnified volume. From the cliff and the valley floor came the sound of half a dozen proton cannon, chugging with deep menacing blasts. A score of Jorman inductors screamed shrilly, whining up and down the scale like so many sirens gone mad. The louder and heavier the spaceship answered the barrage of imitation fire, the more fiercely did the echoers reply.

As if worried and puzzled by the volume of attack, with no sign of the enemy, all the Sinjap ship's lights were playing on the cliff and the valley floor now. And the *Sky-Hi* was neglected!

Panting, the newsman reached the down slanting rock fault, swung Tommy to his shoulders, and staggered down it. What seemed an age but could not have been more than half a minute brought him down to the base of the cliffs. Another thirty seconds of stumbling, and the open port of the *Sky-Hi* yawned dimly before him.

He tossed the boy on his shoulders inside, into the lock space between

the inner and outer doors, and dived in after him, slamming the outer port shut just as a beam from the other ship flashed back towards them.

Lani and Anne were already inside, and only waiting for the tell-tale to flash as the door closed. An instant after the lock clicked, the Benson blasts roared, the thin whine of the stabilizer shrilled into a scream that went up beyond hearing range, and the *Sky-Hi* was flashing up toward the unsullied night of space.

IN the tiny kitchen of the *Sky-Hi* Anne Abbott sat. Just sat. It was twenty minutes since they had taken off. Lani, at the controls, had made the take-off. With the skill of a veteran pilot she had angled the ship upward in one of the most dangerous of maneuvers—a forty-five-degree ascent that had taken them over the grounded enemy ship at a height of no more than five hundred yards, so close that the back-blast from their tubes had blown the standing K-1 boat flat into the rocky valley.

It might or might not be damaged beyond hope of ever getting it off again. At any rate, it would not be pursuing them again for many hours. And by that time patrol ships from Polar City would be on their trail.

They were safe, and now that they were, the reaction was hitting Anne. The rest of the family were natural adventurers. They seemed to feel nothing but jubilant excitement. But she—well, she rather thought that a good nose-powdering would restore her composure somewhat.

She opened her knapsack and, for the first time since she had put him there, remembered Echo. Echo stirred uneasily as she unrolled him from her handkerchief, and hastily she popped more chocolate into his maw. Echo relaxed, and made a little sound that seemed to be a cross between a cat purring and a man smacking his lips.

Anne looked about for a place to put him, and finally settled on the shelf beside the kitchen radio. Echo settled down there, clutched the edge of the shelf with fingerlike roots, and swayed happily.

Anne powdered her nose and felt better. Then she turned on the radio. A chime rang, and a woman's voice announced:

"Exactly midnight, New York time. And now, as usual, Molly Manson repeats her broadcast for today for the benefit of distant listeners who are abed when it's morning in New York."

Anne smiled wanly. At this moment she wasn't interested, didn't care if she never heard Molly Manson again, and wouldn't have picked up a pencil to write down the recipe she had tried so frantically to copy a dozen hours ago even if there had been one right at her feet.

Instead she stood up. Echo, on the shelf beside the radio, had turned toward it as if listening. He began to make a noise. To keep him quiet Anne tossed the last of the chocolate into his open maw, and Echo rubbed up against the radio, quivering pleasantly, as if associating it with the candy.

"Stay there!" Anne said sternly, as she rose and started up the companionway. "I want to show you to somebody."

She emerged into the control room. Jim and Lani were bent over the control boards.

"If only," Jim was saying mournfully, "we'd at least found the message Bill Morgan left."

"We did," Anne said smugly. "I've got it down in the kitchen. I mean, Echo has it—the one that said 'Pinch-me.' Of course, to a Sinjap it wouldn't make any sense at all. It would just sound like childish nonsense. That's what Morgan wanted. That's why he trained the echoers to sing, and recite verses, and gave them names like Cerberus and Big Ben and Pete and Repeat. He did it for his own amusement, of course, but also because he figured that if the Sinjaps found the wreck of his ship after he left, they'd think he'd gone crazy. Do you see?"

"Well, vaguely," her husband said dryly.

"So," Anne told him, "Echo has the whole formula. He was the most receptive, so Morgan chose him to teach it to. And you only have to pinch him

and he'll repeat it for your benefit whenever you wish."

THEY trooped back down to the kitchen with her.

"And this brings to a close Molly Manson's daily re-broadcast—" the radio was saying.

Anne switched it off impatiently.

"Wait'll I get a pencil," the reporter suggested. "I'll write the formula down for safety's sake . . . Okay, hon. Make him talk!"

On the shelf beside the radio Echo was swaying back and forth beatifically, apparently just finishing the last of the chocolate. Anne reached up and pinched him. The fungus opened its maw with alacrity.

"Formula!" Anne directed, and Echo responded.

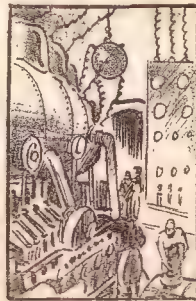
"Formula!" it said decisively. Then it hesitated as if confused, made a couple of uncertain noises, and seemed to collect itself.

"Today," it stated firmly, "we are going to make Molly Manson's old-fashioned lemon meringue pie. Take one-half cup of sifted flour, one and one-quarter cups of sugar, three egg yolks, beaten with the white of one egg, one-half tablespoon butter, juice of two lemons. . . ."

Echo had learned a new formula. One he liked better. Because this one went with chocolate.

Anne gave a little shriek of dismay. Lani began laughing, but Abbott groaned.

"My Lord!" he said. "Now, we've got to find Bill Morgan, or his formula is lost."



IN NEXT MONTH'S ISSUE

TRUE CONFESSION

A Story of a Robot by F. ORLIN TREMAINE

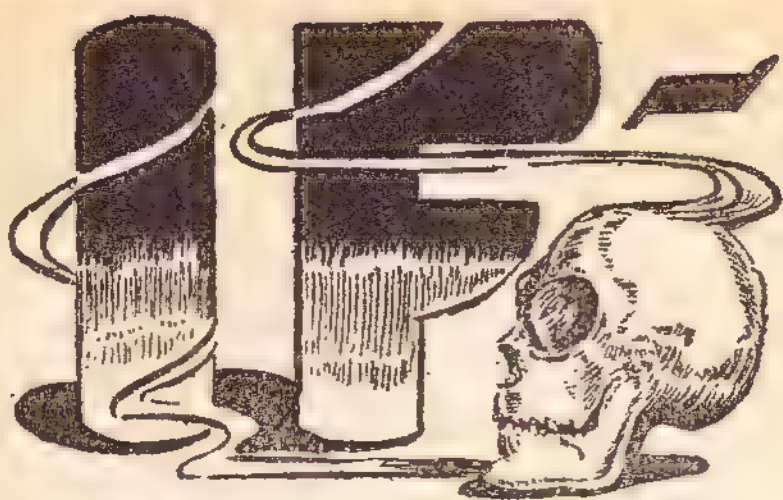
NO EXTRA COST FOR VITAMIN A

(CAROTENE)

SMITH BROS. COUGH DROPS

(BLACK OR MENTHOL—5¢)

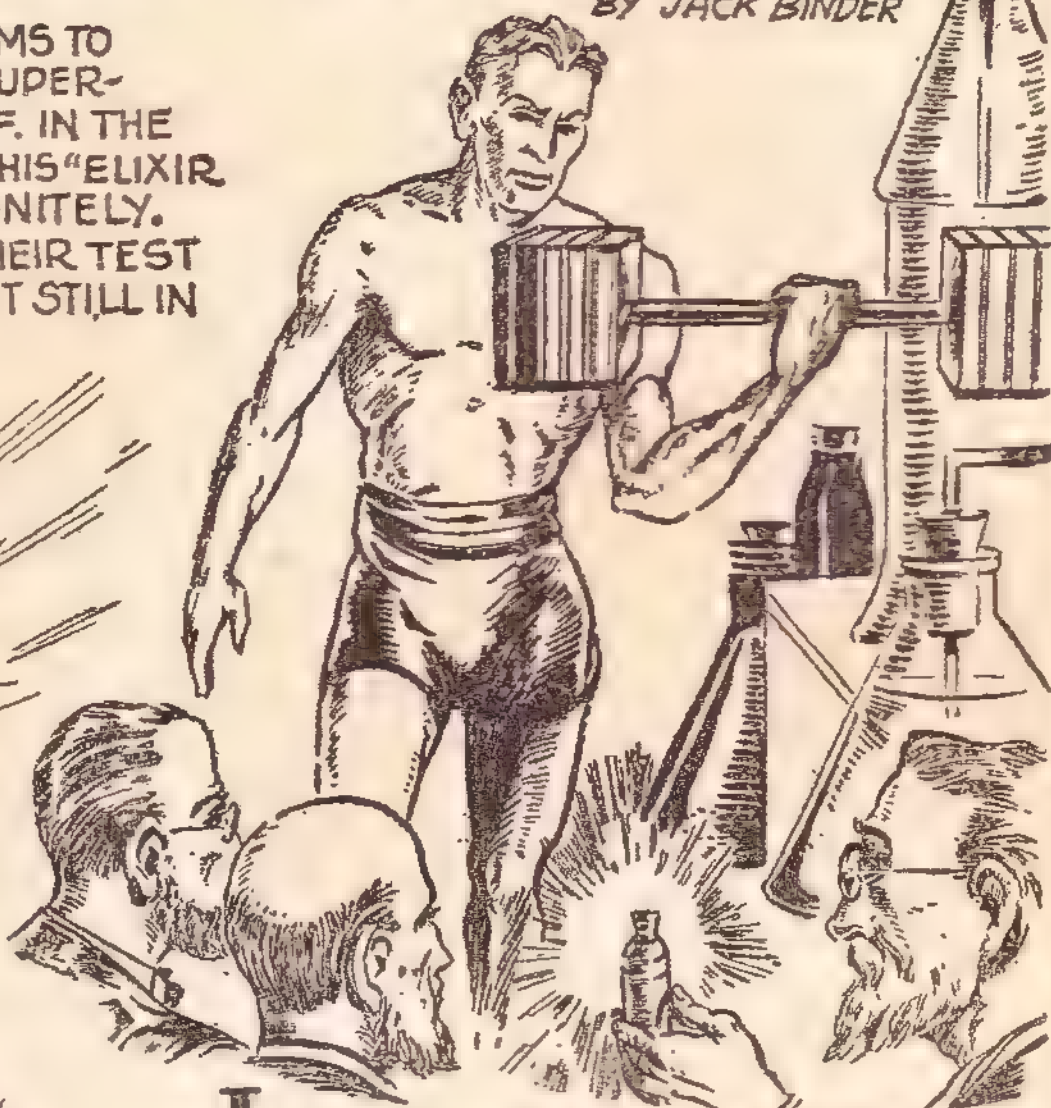
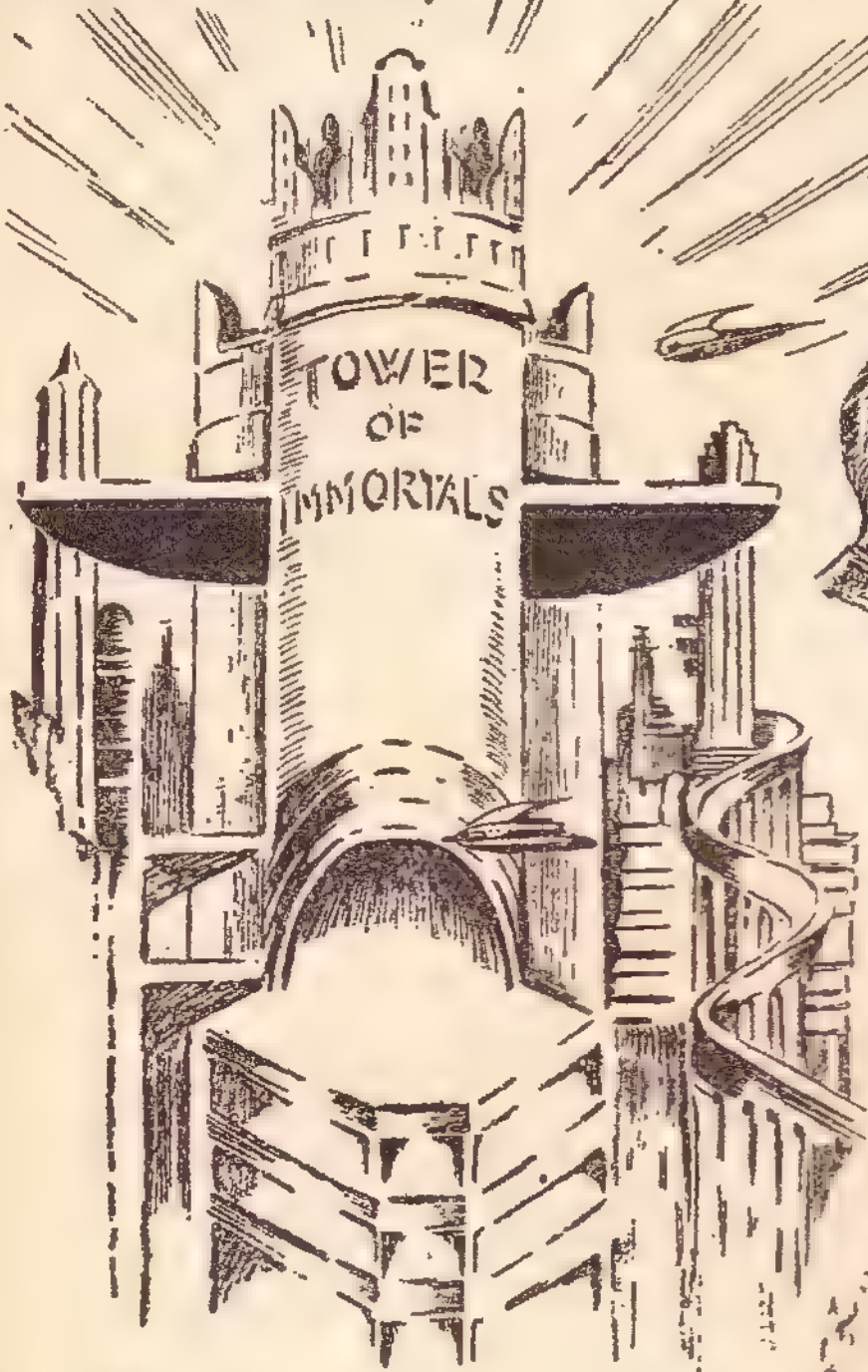




SCIENCE CONQUERED DEATH!

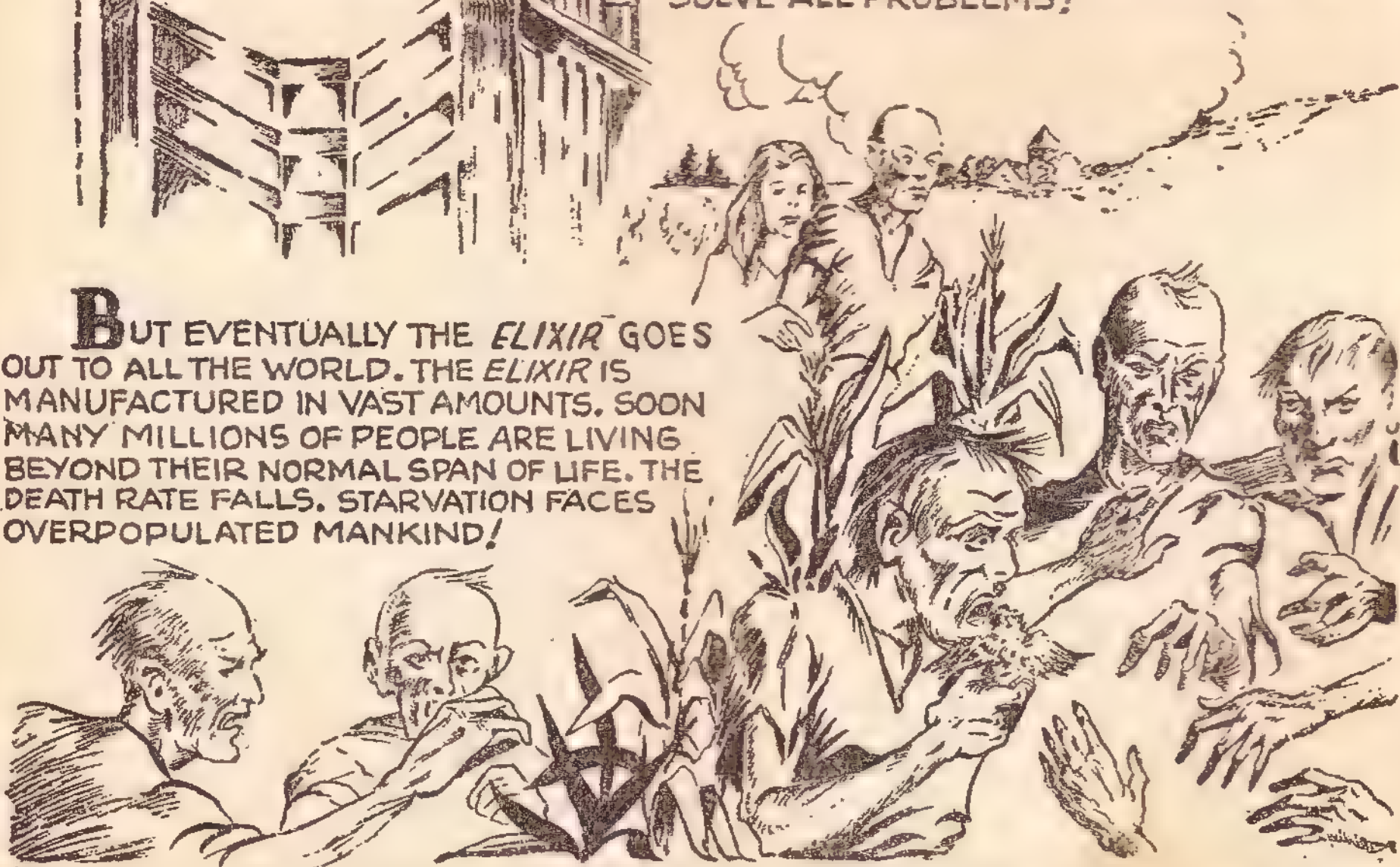
BY JACK BINDER

HORMONE RESEARCH NOW SEEMS TO POINT THE WAY TOWARD A POSSIBLE SUPER-HORMONE, STAVING OFF DEATH ITSELF. IN THE FUTURE, PERIODICAL INJECTIONS OF THIS "ELIXIR OF LIFE" MAY POSTPONE DEATH INDEFINITELY. BIOLOGISTS LOOK WITH AWE UPON THEIR TEST SUBJECT.... A MAN 100 YEARS OLD BUT STILL IN THE PRIME OF LIFE!



IT IS DECIDED TO USE THE *ELIXIR* ONLY WITH DESERVING MEN. CERTAIN SCIENTISTS, INDUSTRIAL LEADERS AND WORTHY STATESMEN ARE GIVEN THE GIFT OF IMMORTALITY. LIKE GODS, WITH THE WISDOM OF MORE THAN ONE LIFETIME, THEY BENEFIT CIVILIZATION. THEY SOLVE ALL PROBLEMS!

BUT EVENTUALLY THE *ELIXIR* GOES OUT TO ALL THE WORLD. THE *ELIXIR* IS MANUFACTURED IN VAST AMOUNTS. SOON MANY MILLIONS OF PEOPLE ARE LIVING BEYOND THEIR NORMAL SPAN OF LIFE. THE DEATH RATE FALLS. STARVATION FACES OVERPOPULATED MANKIND!

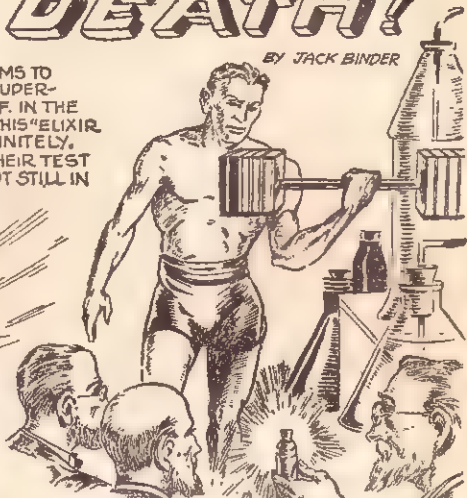
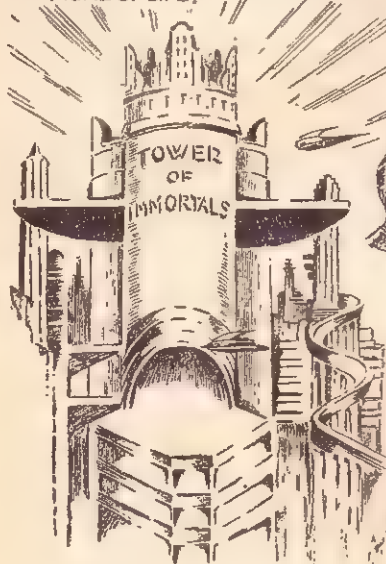


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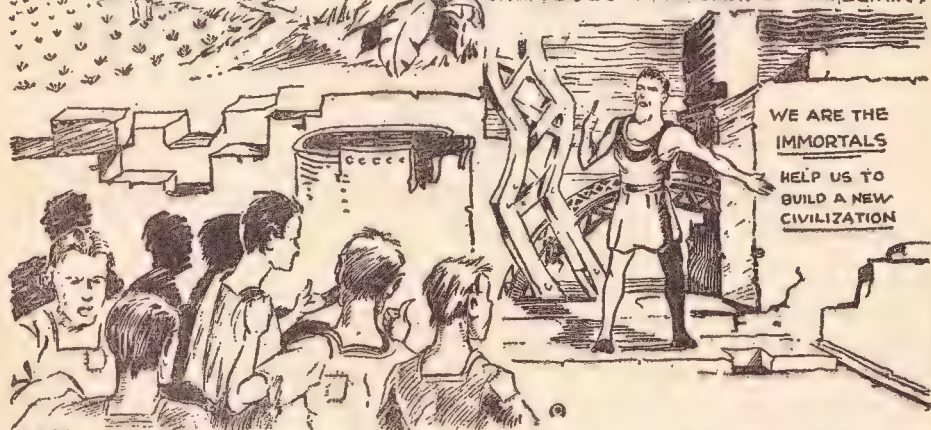
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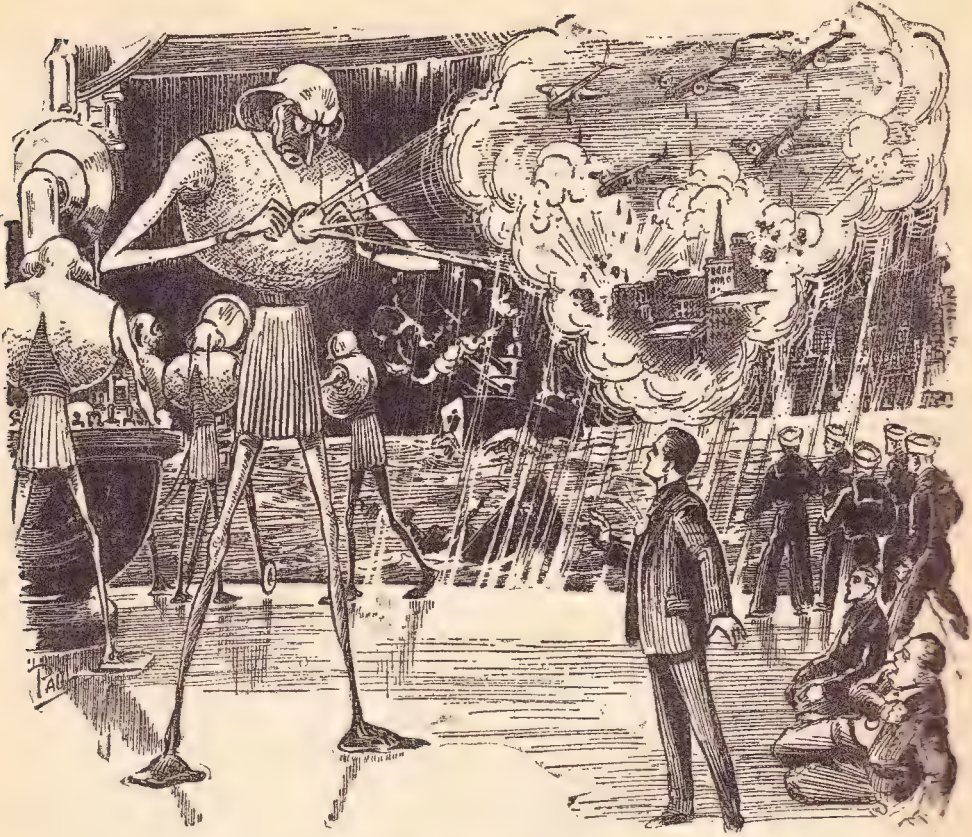
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STARS VANISHED!

The Pen Is Mightier Than the Sword—and the Dreams of a Poet May Be More Powerful Than the Guns of a Battleship!



Thoughts began to appear in my mind—strange, weird thoughts

THE ETERNAL LIGHT

By ROBERT MOORE WILLIAMS

Author of "The Man Who Looked Like Steinmetz," "The Warning from the Past," etc.

HE was living in an attic in Greenwich Village, but he could not have welcomed me with more ease or greater dignity if he had been living in a palace. I think he never realized the squalor of his surroundings, never saw the grimy tenements, the narrow streets. His eyes looked upward, toward unseen heights, looked outward, toward a coming glory.

We chatted, as old friends will, of familiar things; but I saw the gaunt lines on his face, and I asked him to dine with me. When he accepted, I was glad—glad of a chance to buy him the square meal that he obviously needed and probably didn't get often, the lot of poets being what it is.

Blaine Wellman was a poet. He should have been one of America's greatest, but he wasn't. Somehow he

had never fitted the words together to produce the epic of which he dreamed.

Looking backward now, long after the horror and the terror of the events of that evening when I dined with Blaine Wellman, it is good to think that if he never sets pen to paper again, he will still have produced the greatest epic in American history.

He ordered sparingly, despite my urging, and when we had finished eating, my first thought was to suggest a tour of the bright lights. But that would have cost money, and while I could have paid the tariff, such an obvious show of my prosperity might have wounded Blaine. No doubt pennies looked as big as dollars to him.

I compromised with myself and suggested the Staten Island ferry, where we would have a marvelous view of the New York skyline, and where the fare is only a nickel.

My nickels clicked in the turnstile and we joined the throng. A fat man in a blue suit dug his elbow in my ribs and his thin wife following close behind him stepped on my foot. A pretty girl, her lips heavy with carmine, twisted the feather of her hat into my eye, and a brawny longshoreman in a sweat shirt shouldered me to one side. With Blaine following behind me, I fought my way to the rail. The landing stage was yanked aboard, the ferry tooted hoarsely twice, Diesel engines throbbed, and the water boiled.

We were off—on a trip to Staten Island, to sniff the breeze and to see the skyline.

Before the trip was over I had forgotten the breeze and the skyline, and the trip to Staten Island had turned into a voyage to another world.

Night was coming. Long shadows lay across the harbor. Behind us the skyscrapers of Manhattan huddled uneasily in the coming dusk. To the right, along the Jersey shore beyond the Statue of Liberty, Jersey City was dim under the threat of coming fog banks. Along the farther shore the gray ghost of an anchored destroyer swung with the current. Farther up the river, I knew, the naval training ship *Wyoming* was at anchor.

And I also knew that beyond the

Narrows the cruisers and the battle-ships of the Atlantic Squadron kept grim watch over the harbor, each ship for good reasons at full battle strength.

But at my elbow Blaine spoke.

"The torch burns dimly tonight, I think."

At first I did not understand what he meant. My eyes followed around the skyline, where the million lights of greater New York were beginning to show. In all that panorama there was no unusual dimness. There was no blackout here, thank God!

Then I followed the line of his pointing hand and I understood what he meant. He was pointing at the torch of the Statue of Liberty.

"Oh . . . Yes . . ." I murmured.

Not here, as yet, but elsewhere tonight that torch was burning dimly. That was why the Atlantic Squadron kept guard outside the harbor. There was war in the world. Submarines lurked in the ocean lanes. Torpedoes sent merchant ships down toward the depths. Over Europe battle planes loosed bombs upon prostrate cities, machine-gunned trenches filled with youth taken from farm and factory.

WAR! The newspapers were filled with it, the air jammed with news flashes. Rumors of gigantic air armadas, of huge bombing planes, of invasions by air. Pictures of parachuted troops, descriptions of impossible ships seen over Paris, London, and Berlin. War!

But there was no blackout in America as yet. The fervent prayer of the nation was that there would never be.

What the future would bring, no one knew. Powerful streams of propaganda poured hourly over the United States, and wishy-washy public opinion flowed with the strongest propaganda wind.

Blaine shivered, and the gaunt lines deepened on his face.

"You know, John—" he began, and the words trailed off as his eyes rose involuntarily upward. Automatically I followed his gaze, and I saw, far overhead, a single steady light.

"A balloon," I shrugged. "It's ad-

vertising something or other."

"Yes. Yes," he answered. "It must be a balloon!"

Then his voice caught, rang sharp and clear.

"That's no balloon. Look!"

Simultaneously I realized two things. The first was that the light overhead was enlarging rapidly. The second was that the people on the boat were stirring uneasily, and looking up.

I heard a sound. It was lost in the distance, dim, and far away. But above the throbbing of the engines of the boat, above the slapping of the waves, it came to my ears—a sound like millions of microscopic firecrackers exploding together.

Firecrackers in the sky!

With the shock of a sudden nervous chill, I realized that the babble of voices had ceased. All the clattering tongues had died. The passengers were still as they stared at the thing in the sky.

"What is that thing?" I whispered.

He shook his head.

"I don't know."

His voice was drowned in a rising volume of sound. Those microscopic firecrackers, millions of them, were coming closer. Fast. And the sound was coming from that enlarging point of light.

The light swept downward. Downward. I could see it enlarge, could see it grow to the size of a basketball, grow to the size of the perisphere. And keep on growing!

DOWNWARD, in a growing torrent of roaring sound. It was coming toward us, falling, like a gigantic meteor, from the farther reaches of the sky, from the worlds of space.

We were directly under it. Over the roar of the exploding firecrackers rose the sharp shrill keening of a woman's scream. As if in answer, there came the throb of a ship's whistle. Our ferry tooted hoarsely, desperately. Engines growled savagely as the frantic pilots tried to change its course. The propellers battled the water like enraged whales fighting to be free.

Passengers leaped quickly from the rails, swirling in knotted clumps

as a mad panic struck them. Their one thought was to escape, but there was no escape. That thing—whatever it was—was coming too fast, driving downward too rapidly for anyone to get out of its path.

I saw Blaine's fingers curve around the rail, the muscles on the back of his hands standing out like wire cables. His eyes were frozen on that enlarging light.

It was big, seemingly big enough to blot out the sky. And growing larger, roaring louder, coming straight toward us. The roar seemed to smash my eardrums. The intensity of the light blinded me. I closed my eyes.

This is the end, I thought. This is death. Only seconds now, split seconds, less than seconds. Now I know how a man feels in the electric chair when the man-made lightnings are racing toward him.

The heavens split with the roll of thunder and the thunder died and I held my breath until my lungs almost burst, waiting for the end. Then I realized that the roar was gone, was done. I opened my eyes, and they told me something that my mind refused to believe.

The mad downward flight had been checked. The thing was dropping still, but it was dropping slowly, and was maneuvering toward an open stretch of water. It was big, as tall as the Woolworth building, a sphere that blotted out all the sky in front and to the right.

It settled downward, touched the water, came to rest, and the dim throbbing was silent.

There are times when the mind does not function. This was one of those times. My brain registered the impressions of my eyes, but my mind shouted "Liar!"

Vaguely I saw that the sphere was divided into two main levels with a driving engine rising from top to bottom. I saw that the material covering the two main levels was transparent. I looked through the transparent sphere and saw—creatures moving.

Men? No, they were not men. Their bodies were similar to the human form, but their heads were out

of proportion. Too large. And the creatures were too big. They were twice as tall as men, perhaps three times.

They looked out over the harbor from curious eyes.

My mind groped. That sphere, it was a ship of some kind. An air ship, or perhaps—Intelligent creatures had built it, manned it now, creatures that were not men.

The slow thought ticked through my brain: there had been wild newspaper stories of ships seen over Berlin, over Paris, over London—huge ships. Perhaps there had been only one ship, seen at different times. Perhaps this was it.

My mind reeled as it tried to grasp the meaning of what my eyes saw. A ship such as this on Earth! What did it mean? A cold paralysis slowed my thoughts, a merciful paralysis, merciful because it kept me from thinking.

Around me the paralysis held everyone else. No one moved. The ferry, its engines stopped, drifted. Blaine Wellman's hands still gripped the rail but his head was cocked to one side and he looked quizzically, with eager unfearful curiosity, toward that huge sphere.

I swear there was no fear on his face. Instead there was the thin trace of a smile riding over the hollows of his cheeks, wrinkling the corners of his eyes. In this moment, when madness had settled over earth, Blaine Wellman smiled, and was unafraid.

What did he see, this poet, that I did not see?

"Look—the color," he whispered. "It's beautiful."

I had no time to wonder. The shrilling of a whistle jerked my eyes away from the sphere. One look, and my heart leaped.

THE destroyer, the calls from her radio unanswered, was going into action. A searchlight flamed from her forward deckhouse, speared a white finger of light toward the sphere. Dim blobs of light illumined her deck. The blue jackets tumbled up from below.

How they went into action, those

sailors. Canvas covers were jerked from her deck guns, men leaped to their posts, shells were slammed into the breeches, the muzzles came up. In the side turrets muzzles slewed around. Vapor exploded from her stacks, anchor chains rattled.

Boom! A forward gun spoke. It was a warning shot, not aimed at the sphere. It was a signal to surrender.

The giants in the sphere glanced toward the destroyer. They wandered toward the side where she lay, and they began to work things that looked like guns! A white light leaped from the sphere toward the war vessel. She answered it!

Boom! No single gun this time, but a blast from every weapon that could be brought to bear. Not a warning shot, but a volley designed to blast and destroy. Every exploding gun was aimed directly at the sphere.

What the commander of that destroyer was thinking is hard to know. No doubt he was on edge already, tense with the months of waiting and wondering whether the next hour might see his ship ordered to war. Now this sphere had come out of the sky, at a time when only potential enemies were on Earth. The commander had ordered his ship to action.

I held my breath. Over the ferry boat I heard the sudden whisper of a gasp leaping simultaneously from hundreds of throats. A battle was starting, right in front of us. Battle!

Orange flame leaped from the guns, driving projectiles of screaming steel, shells that would explode on contact. The flame drove the shells and the shells struck the sphere. They struck and exploded. But not as gun cotton explodes, with a sudden spash of intolerable brilliance, but with a soft, slow flaring.

My mind was off the track. It was rattled, dazed. What I was seeing was impossible. That sphere, constructed seemingly of glass, was absorbing the full force of the guns of the destroyer, *without being damaged!*

It was impossible. Glass would fly into a million splinters before the impact of those shells.

Then I saw what was happening.

The shells were not striking the sphere. They were striking something that shielded the sphere, an intangible mistlike aura surrounding it, so thin that it was practically invisible. It was turning the shells from blobs of explosive violence into harmless flares that puffed softly, and fell in white droplets toward the water, where they hissed into foaming steam.

Sudden fear sucked at the pit of my stomach. What was this thing that took the fire of a destroyer and was unharmed? What were those creatures who manned it?

Inside the glass shell, I saw them moving, saw them staring at the destroyer, saw them act.

They swung more guns into action! Part of the weapons were trained on the destroyer, the others on us. How they worked those weapons from inside the sphere I cannot begin to guess, but work them they did.

Intolerable beams of light, as bright as if they had sprung from the core of a central sun, leaped from those weapons, splitting the dark sky with incredible brilliance. They touched the moving destroyer and I seemed to see it come to a sudden halt. I was not sure what I did see, for the lights almost blinded me.

But I caught a glimpse of something that smashed at my heart like the blow of a mighty fist.

A HEAVY beam of light, reaching out from the second level, flashed, not at the destroyer and not at us, but at the Statue of Liberty. It circled around the body of the statue as a mighty tentacle of roaring flame. Then it lifted—up—and as it lifted, the statue was broken loose from its concrete base and was moved by the light. As easily as a child picks up a toy, it lifted the massive statue, carried those tons of copper toward and into the sphere at the second level.

"God!" Blaine whispered. "Why did they do that? Of all things, why did they seize that statue?"

"How did they do it, you mean?" I shouted back. How did they lift those tons of dead weight? What kind of creatures were these? Where had

they come from? Mars, Venus? Or from some planet beyond the Solar System? What did they want?

Shrieking pandemonium roared in my ears. The screams of women, the hoarse gasps of men.

"Pilot! Start those damned engines."

"Please save me."

"Take us to shore!"

"Let me out of here."

Lights from the sphere leaped out again, at us this time. Light swirled around me, blinding me. Roaring, it circled my body with a tentacle that was incredibly cold! My feet left the deck. There was nothing but air under me. I was being lifted.

Through brilliant flaming mists, I glimpsed the lights lifting the passengers from the ferry and carrying them feet and hands flailing at empty air, toward the sphere. Vaguely I saw Blaine beside me, a tentacle of light looped tightly around him. He was not struggling against it.

There was a suggestion of opening doors, a feeling that a barrier moved aside. My feet touched solid substance. We were inside the sphere.

And giants were looking down on us.

One glimpse of those faces and my legs buckled under me like rubber. I slid to the floor in a faint.

I must have been out for many minutes. When my eyes opened, I was lying on my back and Blaine was kneeling over me. Beside me a woman's voice gibbered.

"They've got no right to do this."

"They've got the power and that's all that matters," a man answered.

I looked toward them. The fat man who had dug his elbows in my ribs as we boarded the ferry was talking to his scrawny wife.

"What are they going to do with us?" she wailed.

"What would you do, if you had the weapons they got?"

THE ferry passengers were huddled in a group. I saw the pretty girl whose feather had got into my eye. Her jaws were slack.

Men from the destroyer were here.

They, too, had been captured.

"Are you all right?" Blaine asked.

"I guess so. But—"

He stood up. His eyes moved swiftly over the ship. And what he said sounded screwy to me.

"Look at the balance of the design of this ship. And look at the colors they have worked into the metal. These creatures—see their faces. . . ."

He wasn't posing. He was a poet, and the first thing he saw in anything was a harmony—design and color. Even here, now! And the sphere was beautiful, but when I saw what was happening I forgot all about the beauty of it.

The creatures were questioning a group of men they had taken from the destroyer. Included among them was the officer who had been her commander.

"Tell them nothing, men," he ordered. "This is war, and under no circumstances are you to give information to the enemy."

There was something brave about his speech, and something futile. Brave, because in the face of desperate circumstances, he had the courage to fight on, futile because how could he hope to keep from these creatures anything they really wanted to know? But I was proud of him.

One of the sailors turned his head for a quick glance toward the upper river. The commander snarled an order at him.

The creatures turned toward us. They were twice as tall as we and they towered over us like giants. They were clothed in a metal cloth, cut to an odd design, that trembled with a beautiful sheen of colors as they moved.

What world, I wondered, had sired this race? They did not belong to Earth. That was obvious. But most of all—what were they doing here on Earth? Were they invaders, attackers come from space? Would there be war between them and us? Would the massed might of our battle fleets be able to stand against them?

Their faces held me. Calm, impassive, and yet—vaguely curious, slightly puzzled. There was something god-

like about them, and something cold, utterly aloof.

They seemed to hold Blaine too. He stared at them as if he were hypnotized.

They came nearer, eight or ten of them. Looped on chains about their necks were flat metal boxes with glittering mirrorlike fronts. They held other boxes toward us, gestured that we were to take them.

We crawled backward, bunched ourselves together like rabbits.

"I think," said Blaine, "that they only want to talk to us."

He stepped forward and accepted one of the boxes from a solemn giant.

Most of us accepted them. The pretty girl, her rouged face pale, backed away. The longshoreman dropped his box from nerveless fingers. It broke to pieces when it struck the floor. He shivered with a violent ague and sweat stood out on his forehead. The fat man and his wife took the metal cases. The giants seemed to force them on no one who did not want them.

I slipped the chain around my neck and looked down at the surface of the mirror, not knowing what I would see. All I saw was a chaotic shimmering of blending light. A vague glow, moving turning, coalescing, in cream and white, broken by swirls of dots.

A giant hand came down and lifted my chin, directing my eyes toward the mirror on his chest. I understood then. He wanted me to look at his mirror while he looked at the mirror he had given me.

A form of hypnosis was involved in that thought transference, I think. The mirror held my eyes. Its surface began to change. A wavering cadence of flickering dots of light, like the swirl of lights in an electric sign, moved within the material.

Thoughts began to appear within my brain, strange weird thoughts, impulses originating—I knew in shocked belief—within the mind of the giant facing me.

AND what a mind that was! Overwhelmingly vast, throbbing with the pulse of mighty powers, it reached

out and held me. I forgot everything. Who I was, where I was, what I was. I was lost within the mazes of a mystic flow of thought current.

Questions seemed to come to me and I seemed to answer them, and as I answered I began to ask questions of my own. At first haltingly, fearfully, then stronger—

"Who are you?" I asked. "What are you?"

The flickering lights slowed in their rhythmic cadence. No answer came. No answer to my questions. I had answered his questions. I had seemed to have no choice. But he did not answer mine.

I caught the suggestion of balancing thought currents. The giant was deciding whether or not to answer me. In the mirror the lights moved in eddies as he decided.

He reached a decision! I felt it the instant it happened. My breath sucked itself into my lungs and stayed there. The sweep of a hidden, tremendous tension held me.

I was in his power. All of us were in his power. He could do with us as he pleased. He was going to—

A shout rang out. Instantly the thought connection was broken.

I whirled and saw—the sailors staring up the river.

Down the Hudson, she came, the old *Wyoming*. Spray splashing from her bow, her turrets swinging around, she came.

That was why the commander of the destroyer had ordered his men to say nothing. So they might not reveal that a battleship was near. That was why he had scowled at the sailor whose involuntary glance over his shoulder might have betrayed the presence of the ship.

And she came! This was no destroyer. This was the *Wyoming*, a battleship, with all the power of a ship of the line, armed with mighty guns, protected by inches of honest steel.

Now these arrogant giants, who had dropped out of the sky and frightened a peaceful city, would pay. Now was their hour of reckoning come.

Around me human voices screamed encouragement to the battleship. Her

great forward guns swung to point. *Boom!*

I saw the shells strike, saw the drop-lets of white rain pour down to the water. I was too sick to groan.

For the shells from the great guns of the *Wyoming* did not touch the sphere. They splashed into drops of metal on that invisible barrier that protected it! For all its guns, the battleship was no stronger than the destroyer.

From the second level overhead, a white light leaped out. It touched the nose of the vessel. White tentacles raced over the ship.

Stunned, I saw what happened. The ship was not lifted. Instead the ray caught her, stopped her dead. Then, on the surface of the water, it swung her in a great circle around the sphere, and ran her ashore on the mud flats of New Jersey.

The giants had whipped a battleship.

One thing they had not whipped—the fighting heart of the commander of that destroyer. He was inside the sphere, he and his men, and as the giants watched the battleship swing around, he went into action.

"Seize that weapon," he ordered. "Turn it on the giants."

The blue jackets leaped to obey him. The controls from which the giants had operated the light rays were here on this deck.

The commander and his men swarmed over the nearest one. He had nerve, that commander, and his men had the nerve to follow him. Courage. I leaped to help them. Blaine grabbed me.

THE weapon swung around, the commander frantically pushing buttons. At any instant he would find the one that would release the ray. And a giant, turning, saw what was happening. His hands flashed toward the flat case he wore at his chest. He lifted it, held it up, and his face darkened in lines of concentration.

Like a conductor's hands moving an orchestra into a slowing rhythm, the motions of the men about the weapon began to slow. In seconds they stood

powerless, caught and held frozen by the action of a mighty will.

Then, as if at an order, they moved away from the weapon.

All the giants turned. The one who had detected the act of the sailors explained what had happened. "We're done now," I heard someone wheeze.

"They might have let us go if those fool sailors hadn't tried to stab them in the back."

A man sprawled forward, the fat man in the blue suit. He dropped to his knees before the giants, began to whine. "I didn't have a thing to do with that. Them other fellers did it. I didn't. I'm on your side. You just say the word and you'll find me ready to help you. I'm your friend—"

They glanced at him and turned their heads away.

Blaine Wellman stepped forward. He did something that made me love him forever. He kicked that fat man right in the seat of his pants.

"Stand up, you rat!" he said. "We can die like men."

The giants looked at him. There was still no fear on his face.

"If one member of the human race can apologize for the actions of another—" He spread his hands in a hopeless gesture.

And they smiled at him. I swear they smiled. The impassive, immobile faces showed sympathetic understanding! Something from Blaine reached to them, held them for a second in which I dared to hope. Then they turned back to their conference, forgetting Blaine.

When I was able to comprehend

from their mirrors what they were saying, the hope died out.

"A good planet."

"It is well suited to our uses."

"The best we have found."

"But these squidges that inhabit it, these pygmies—"

"We can eliminate them. A gas released in the air will do it."

"They are worthless."

"We have seen them fighting—"

"Insane."

"Not worth considering. Let us destroy them now, all of them. We will be systematic about it. We will begin with this city, then the rest of the continent," a youthful giant urged.

I saw Blaine's face. For the first time the fear showed there.

"But there is justice to be considered," an older one said gravely.

"Yes," another agreed. "We must be certain of our justice."

"Bah!" the younger said. "We have made a careful investigation. If we needed more proof, that corpulent one has just supplied it."

"But the one who smiled and was fearless, and the leader of that gunboat. Those two—"

"Two out of billions!"

"There may be others."

"Doubtful. If so, they are too few. We have investigated."

SILENTLY they conferred. Only a little doubt remained, and that doubt they were fast eliminating. Blaine said nothing. He stood looking up. They were just a little undecided. Only a little. The weight of a feather

[Turn page]



would tip the balance.

They reached a decision. My heart seemed to stop beating. And as they reached it, another one appeared from above. They turned deferently toward him. "We have concluded—"

He shook his head.

"Not yet. We have something on the second level that is perturbing. We cannot understand its true meaning."

"What is it?"

"Come. You must see it. And bring the captives."

Something on the second level! What did they have there?

They herded us upward and I saw what it was.

The statue. They had brought it here, to the upper deck, and while those below had examined us, the one above had examined it.

"We thought, when we first saw it, that it was a fortress. That was why we captured it. Then we thought it was an overgrown pygmy. So we brought it into the ship."

"But what is it?" Another asked.

They asked the commander of the destroyer. He told them, defiantly.

"The Statue of Liberty."

"But what is that?"

"What I fight for."

"Yes . . . Yes . . . But . . ."

They asked the fat man. "A statoo. A statoo," he said. "It's made out of copper. Listen, mister, I didn't have a thing to do with this. Them sailors did . . ."

They ignored him. At random they questioned us. It puzzled them, that statue, puzzled them mightily. They examined it carefully, talked about it, thought about it. They tested its chemical composition down to the last molecule.

What was there about this statue that so puzzled this race? Why should it seem so important to them? Why were they so perturbed about it? Why were they asking all these questions? What were they doing?

Then—I knew. My heart turned over once and seemed to stop beating.

They were still trying to decide what to do. They were still considering the fate of the planet, and the fate

of the squidges that inhabit it.

And their decision rested entirely on that statue, on the way we answered their questions about it. It was the feather that decided the way the balance would swing.

Blaine watched them, saying nothing. But his face was working, and live, eager lights were in his eyes. A change came over him. It lit his face with a glorious radiance. If Rodin's Thinker could suddenly reach the end of his thinking, and raising his head look upward and see stars, his face would look like Blaine Wellman's face at that moment. There would be glory on it, transfiguring glory.

Blaine stepped forward. His heels rang on the floor of that ship sharp and clear. And decisively. There was instant silence.

"This is no statue," he said, "and the fact that it is made of copper is of no importance."

His words were bell-like; clear, ringing sounds. The mirror on his chest swirled with light.

At his first word, the giants gathered around him. And as they moved they walked, suddenly, on tip-toes!

"This is a symbol"—he took a deep breath—"of a dream of the human race. True freedom, true fraternity, true equality—the goals that we pygmies seek—are here symbolized." His words echoed as they ran into silence.

THE giants followed him. They glanced at each other.

"But we have investigated. Toward the rising sun are armies locked in battle. Over the water ships armed to the limit creep slowly. Under the water, submarines lurk. In the air—What is your symbol worth when these things happen?"

Blaine's face was sad and his eyes were sad. He swallowed.

"Yes, I know. The dream of freedom, liberty, equality, has many times been turned into a nightmare. Dimly the torch has burned, as it now burns, smouldering down in its socket. But it has never been extinguished, and always, after the echo of the tramping feet of conquering armies has died down, it has burned again, a pure flame

lighting the hearts of men."

I was awed as I had never been awed before. In his words there was a beating rhythm, like the pulse beat of a human heart.

They listened, those giants. A destroyer had fought them, and had lost. A battleship had come at them with flaming guns, and had been defeated. This sphere could defeat the massed military might of the world.

But was there something that could defeat it? Were the words of a poet

tice and in your justice, we must achieve what we now are seeking—"

A cry rang out, smashing foully into the stillness that somehow was holy, a cry that whirled every head around.

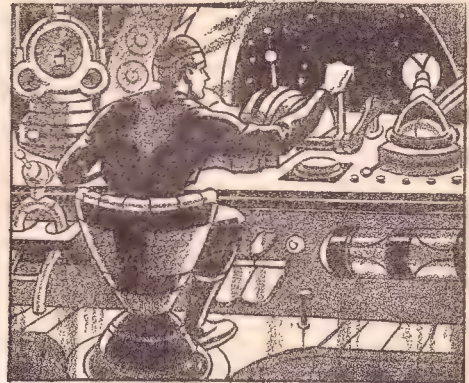
The Atlantic Squadron, in full battle order, was coming up the harbor. Coming to meet this invader, coming if need be, to die.

"What of your freedom, your equality, your true fraternity now, pygmy? They come attempting to destroy us, when we have not harmed

FOLLOW A TERRESTRIAL SECRET AGENT AS HE STALKS THE CITADEL OF SCIENCE

IN

DOOM OVER VENUS



A Complete Book-Length Novel of the Future

By **EDMOND HAMILTON**

COMING IN THE NEXT ISSUE

echoing the grandest dream that ever a human dreamed, stronger than all the armies and all the navies on the globe? Could the epic flight of words do what a battleship could not do?

Was Blaine Wellman, whose eyes looked upward, toward unseen heights, in that moment a man of destiny?

He spoke.

"We have not gained our goal, but our dreams go on, gathering strength as they move, and somewhere, before the end of human history, in our jus-

them?"

It was the most awful question that ever any human being had to answer.

And Blaine Wellman answered it, sobbing out the words.

"They do not know. They do not know. They think you seek to destroy their freedom and they come to defend it. See! See!" His voice was desperate. "Not one man, not two men, but millions of men, offering their lives that others may be free..."

His words died in a wailing gasp. The faces of the giants were blank,

showing nothing. Then a voice spoke.

"Millions of pygmies dying, for the sake of their dream. Dying. . ."

I think they reached a decision then. But what that decision was I did not know. They hustled us to the lower level. They leaped to the instruments that controlled the tractor beams.

The fleet was coming up the harbor. We were huddling together. The giants were manning their weapons.

They swung the rays around. But—they swung them inward, toward us! Bright, blinding beams of light lanced out, toward us. I screamed, and fainted.

Here things become confused. I do not remember exactly what happened.

I recall regaining consciousness in Battery Park, where the tractor beams had deposited us, and seeing the sphere rising into the air. Inside me a vast void filled up. The sphere was rising. It was going away. We were saved. Saved!

I REMEMBER shouting at Blaine that he had saved us, and screaming at him to tell me what he had done and how he had known to do it.

"How did I know? They harmed no one. That destroyer, they did not annihilate it. The *Wyoming*—they ran it ashore. The passengers from the ferry were not harmed. They were gentle, always. From this I knew they were peaceful. And their sphere. . . The design, the harmony in it, the colors. It was beautiful. An appreciation of beauty is the mark of an advanced intelligence, and true intelligence is always peaceful. Oh, they were dangerous, infinitely dangerous,

and if they had not found something worthwhile here, their decision would have been different. But they were just, and if we could only appeal to their justice. . ."

The newspapers, reporting the event afterward, stated that the strange space ship was frightened away by the approach of the battle fleet. "Recognizing superior armament, they chose to flee," the news writers reported.

And perhaps the newspapers were right in assuming that the battle fleet frightened the invaders away. But I wonder— Did the battleships scare them, or did the appeal of a poet, voicing the greatest human dream, and the sight of pygmies willing to die for that dream, probe to their sense of justice?

Perhaps we will never know. Probably we will never even know where they came from. Perhaps some day, when space travel arrives, we will meet them again, on some far distant planet, perhaps even in another system. Until then it is good to know that somewhere in space such a race exists.

I like to remember one final scene.

The battle fleet was drawing nearer, and the sphere was rising, as if it sought to escape. But it rose a few hundred feet and stopped, hung motionless in the air. From its center reached a heavy tractor beam, a beam that carried something.

I like to remember that beam gently replacing on the pedestal from which it had been reft, the statue that still stands in the harbor—Liberty Lighting the World!

"I TALKED WITH GOD"

(Yes, I Did—Actually and Literally)

and, as a result of that little talk with God some ten years ago, a strange new Power came into my life. After 43 years of horrible, sickening, dismal failure, this strange Power brought to me a sense of overwhelming victory, and I have been overcoming every undesirable condition of my life ever since. What a change it was. Now—I have credit at more than one bank, I own a beautiful home, drive a lovely car, own a newspaper and a large office building, and my wife and family are amply provided for after I leave for shores unknown. In addition to these material benefits, I have a sweet peace in my life. I am happy as happy can be. No circumstance ever upsets me, for I have learned how to draw upon the invisible God-

Law, under any and all circumstances.

You, too, may find and use the same staggering Power of the God-Law that I use. It can bring to you, too, whatever things are right and proper for you to have. Do you believe this? It won't cost much to find out—just a penny post-card or a letter addressed to Dr. Frank B. Robinson, Dept. 711-I, Moscow, Idaho, will bring you the story of the most fascinating success of the century. And the same Power I use is here for your use, too. I'll be glad to tell you about it. All information about this experience will be sent you free, of course. The address again—Dr. Frank B. Robinson, Dept. 711-I, Moscow, Idaho. Advt. Copyright 1939 Frank B. Robinson.



Science Questions and Answers



THE LIFE GAS

Oxygen is supposed to be the most vital component of the air. What is the minimum percentage of oxygen needed in the atmosphere to maintain life? Also, can organisms survive in pure oxygen—or without oxygen?—E. E. S., Gary, Indiana.

Twenty-one per cent of our atmosphere consists of oxygen, so you can see that it is rather essential for human breathing. The remaining gases, comprising 79 per cent of the air, have little use assigned to them.

Scientific study shows that animals cannot survive in an atmosphere of oxygen alone, in nitrogen, carbon dioxide, helium, or argon. Series of experiments have proven that animal life, in an atmosphere of pure oxygen, with other conditions normal, would cease to exist after two to five days.

One of the most surprising results of these experiments is that animals die in from a few to ten days when confined in an atmosphere composed of nitrogen and oxygen, the normal proportion, but without carbon dioxide and the rare gases, such as helium and neon, etc. On the other hand, an atmosphere consisting of 79 per cent helium and 21 per cent oxygen permitted animal life to exist normally, in some cases apparently better.

By using argon instead of helium and with the same percentage mixture the animals (mice) would not survive as they did with helium. The argon mixture would diffuse through the living cells less rapidly than the natural air and the helium more rapidly, which might account for this difference. By decreasing the argon to 75 per cent and increasing the oxygen to 25 per cent, life was supported, so far as could be observed, better than in normal air.—Ed.

LAND TIDES

Can you tell me how scientists are able to study the tides on Earth? I'm not referring to the tides in the ocean, caused by the gravitational attraction of the moon. I mean the tides on the supposedly solid crust of the Earth itself—which are also caused by the moon.—H. S., Buffalo, New York.

Various experiments have been made at various times and places for detecting a theoretical tide in the Earth's crust. In one successful experiment, the scientists buried a horizontal pipe, half filled with water, 500 feet long, many feet below the earth's surface. By ingenious optical devices they were able to photograph the advance of the tidal wave as the moon went about the Earth. The difference in the height of the tide observed in the pipe and that computed on theoretical grounds, assuming the Earth perfectly rigid, showed just how much the Earth's crust yielded to the moon's gravitational pull.

They determined that the Earth yielded with approximately the same elasticity as steel. What this experiment really gave was the amount of tilt of the buried pipe with respect to the water level, and could not give any indication as to a change in absolute direction of the plumb-line with respect to the

stars. So the Earth's crust moves perceptibly—a fact first noted by the great Lord Kelvin!—Ed.

THE INFINITIES OF SPACE

How great a distance can astronomers probe the cosmos? Equipped with the telescopes of today, how far out into the universe can they see?—B. L., Red Bank, New Jersey.

Astronomers can see—with the aid of powerful telescopes—as far out as the most perceptible point of light is visible. To estimate the distance involved, the following factors have to be taken into consideration: First, we know that on the average nebulae are 15,000 times as bright (photographically) as the stars. If then we know how bright the nebula looks, we can estimate its distance. The results are somewhat rough, for the nebulae vary considerably in real brightness. But a fair average has been obtained.

With the greatest existing telescopes it is possible to photograph a nebula of the 21st magnitude—2,000,000 times farther than anything that can be seen with the naked eye. Such a tiny speck is calculated to be at the enormous distance of 250,000,000 light years away. An unusually bright nebula indeed might just be caught by our telescope if it were a half-billion light-years away.

There must be more nebulae even beyond this limit, so remote that no existing telescope can reveal them. The telescope of tomorrow may do the trick. For the material universe extends beyond the utmost limits of our observation. At present, we have sounded its depths with the longest line human skill has yet devised, and the cosmos seems to be unfathomable.—Ed.

WINGED POWER

Recently, in one of your departments, you published some interesting statistics on the relative speed of various fish of the sea. Can you give me some information on the comparative speed of birds? Which fly the fastest?—D. O., London, England.

Ornithologists have gone to rather extreme lengths to chart the relative speeds of birds, and their reported findings are pretty interesting. Observers using airplanes have clocked the flight of the duck hawk between 165 and 180 miles an hour! Diving at a flock of hawks at a velocity of nearly 175 miles an hour, one aviator tells of a duck hawk that raced past him "as though the plane were standing still."

The canvasback, although meeting less wind resistance than most other birds because of its "streamlined" body, can only do 72 miles an hour at best. Speeds of 50 to 60 miles an hour have been recorded for mallards, although it has a pretty large wing surface.

The hummingbird isn't as fast as rumor would have it. Two records on the ruby-throated hummingbird list its velocity in normal flight at 45 and 55 miles per hour.

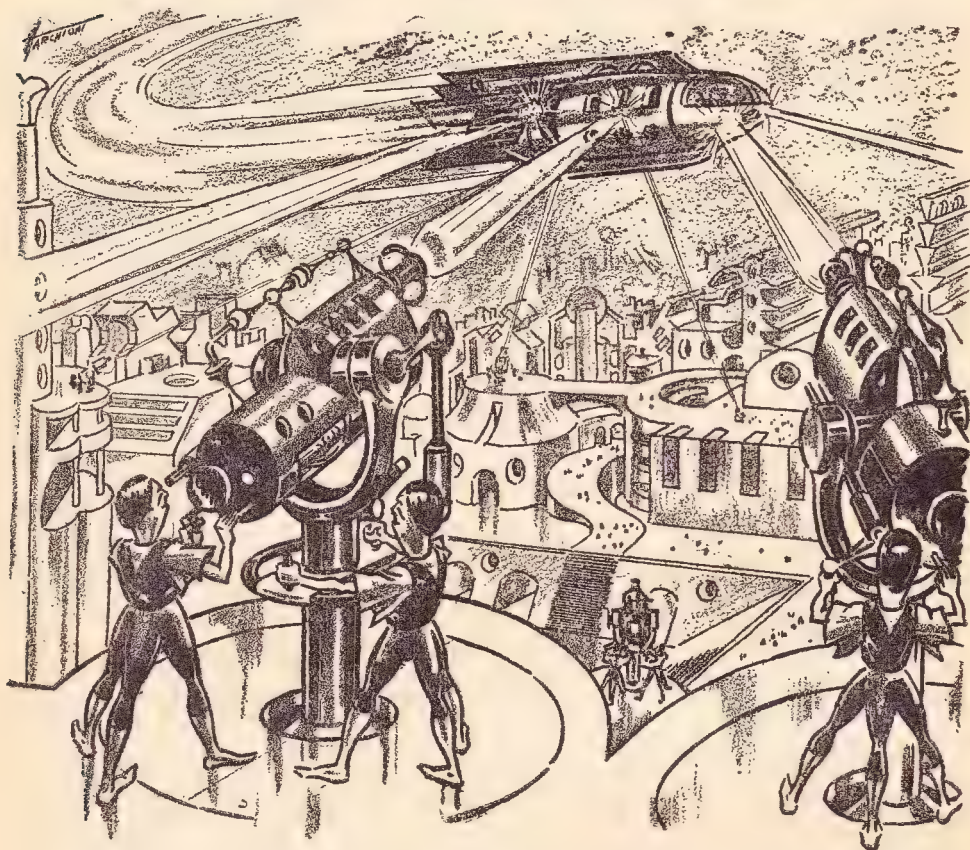
As for the blue jay, its cruising speed is a

(Continued on Page 124)

THIS department is conducted for the benefit of readers who have pertinent queries on modern scientific facts. As space is limited, we cannot undertake to answer more than three questions for each letter. The flood of correspondence received makes it impractical, also, to promise an immediate answer in every case. However, questions of general interest will receive careful attention.

CONQUISTADORES FROM BEYOND

By NICHOLAS E. KENEALY



"Our heat rays are ineffective. Let's turn the oxygen projectors on them," Vendro said

There Was Only One Way to Save the World of Sereia—to Wage a War Without Weapons!

CIDAK VENDRO bowed low before his ruler.

"I am afraid, sir, that what I have to report is as alarming as it is momentous. The scientists are only too correct. We are about to be invaded by aliens from outer space."

The Emperor of all the Tripeds of Sereia rose to his full height, towering a head above his muscular counsellor, who stood almost four feet high himself.

"You mean, Cidak Vendro, that those old fools in the tower have finally

A PRIZE-WINNING STORY IN

made a good guess about something. If so, there is something in this 'law of averages'."

The Emperor had reason both for his surprise and his sarcasm. During the entire length of his reign the gray-beards of the Tower of Scientists had predicted one disaster after another in the manner of the boy who so often cried wolf when there was no wolf. The populace of the Blue City had long since ceased to give heed to the calamity-howling elders. In particular, Michek Drefnya, Emperor of the dominions of the three-legged race, being a hard-headed realist, had disregarded, even scoffed at the ancients. Now here came Cidak Vendro, the one man whose opinions the Emperor valued, to confirm the latest rantings of the scientists.

"Yes, sir, I've seen the sonic indicators in the Tower of Scientists myself. The vibrations indicate that there is a moving body approaching the planet at an extremely high rate of speed. It's too small to be anything but a space ship, and its straight course definitely indicates propulsion. It is positively no meteor."

Michek Drefnya pondered for a moment.

"And how far has it yet to come?"

The counsellor figured for a moment.

"About seven million miles, sir. At the rate they are traveling we should have several days before they arrive."

"Well, what is to be done. Shall we shoot them out of the sky, or shall we give them the keys to the city?"

"We have a little time yet to make up our minds," said Cidak. "The telepathic detectors will not begin to operate until they come within half a million miles."

"Just the same, we had better dust off a few weapons and stand by for hostilities. If we do not know whether they are three-legged humans or two-legged beasts, we had better not wait too long to find out. You are in complete charge, Cidak Vendro."

Cidak took the Emperor at his word. Under his astute direction, all the resources of the tripeds of Sereia were thrown into a concerted effort to in-

Meet the Author of This Story



Nicholas E. Kenealy

THE news that Nicholas E. Kenealy had won a prize in our amateur author's contest followed him for more than two thousand miles before he learned about it. Our letter announcing him a winner pursued him all the way from Los Angeles to Hawaii.

Mr. Kenealy is twenty years old, and a soldier. When he wrote the story he was stationed at Ft. MacArthur, California. But when we accepted it he was transferred to Schofield Barracks in the Hawaiian Islands.

Mr. Kenealy has long been a follower of **THRILLING WONDER STORIES**. His favorite artist is H. W. Wesso.

crease the military defenses of the three legged people—sole intelligent inhabitants of the small green world.

Ray projectors tapping heat power from the core of the globe were set up and placed in working order. The most explosive of chemicals were compounded to hurl even deadlier mixtures at the first hostile sign of the approaching visitors.

BY the time this was done, the space ship had approached almost within earshot of the telepathic detectors. Cidak Vendro again visited the Ruler of his allegiance.

OUR CONTEST FOR AMATEURS!

"We are all in readiness, sir."

Michek Drefnya nodded his assent.

"But one more thing, sir," said Cidak. "We would like to try a new weapon, something so devastating in its effect that I have thought it best to get your permission to use it."

Cidak Vendro squatted down upon his hind leg and proceeded to enlarge on this revelation.

"One of our younger scientists—a man who has been working less than two hundred years—has discovered that under tremendous pressure he can liquefy oxygen, the most deadly of all known gases."

The Emperor always got to his feet when stirred. He did so now.

"Of what special benefit is that?" he demanded. "If you liquefy oxygen, what will it avail? Breathed into the lungs it has a disastrous effect on the respiratory system, but how could it be inhaled in a liquid form?"

"I am well aware of that difficulty, sir. But this oxygen will not remain in a liquid form. When the pressure is removed, the oxygen regains its gaseous form. The energy released in the physical change may be utilized to force clouds of oxygen on the invaders as if fired from a gun."

The Emperor considered. "Your explanation is clear," he said. "But—it seems a cruel death for any living thing. Hence, my decision is this: If the aliens prove dangerous, you may use it as a last resort. If possible, try to exterminate them in a more humane manner. Remember! We are humans, not beasts."

The counsellor bowed and betook himself to the Tower of Scientists. He found Kennek Vordoy, oldest of the graybeards, seated before the complex machinery of the telepathic detector. The old scientist greeted his visitor without looking up from his scanning mirror.

"It is beginning to come in, Cidak Vendro."

The counsellor joined the old man in gazing at the scanning mirror. "What are the invaders thinking?"

"I shall know in just a moment."

and wished that his trick at the radio was over. How could anyone expect to get any signals here in outer space? No use trying to contact that world ahead. The whole staff had been trying that for days with no success. No use even stopping there. How could there be any intelligent life there? Hadn't all the readings indicated a chlorinated atmosphere? How could anything human live in chlorine?

"Now!" exclaimed Kennek Vordoy, as the telepathic detector began to register the thoughts of the yawner on the space ship. "It's beginning to come in. In a moment we shall know the full intentions of these visitors from outer space."

Kennek's serpentine digits played a symphony on the bank of dials and keys spread before him.

"You see how it operates, Cidak Vendro. A delicate antenna, suspended far above the tower, picks up the electrical impulses created by the thoughts of all mankind. Inasmuch as each being's thoughts come in a different frequency, it is a simple matter to adjust the detector to the thoughts of any one individual person. A complex arrangement of sensitive photo-electric cells converts these impulses into sounds, so that they issue from the receiver translated into our own tongue."

"But how will you be able to separate the thoughts of the aliens from those of our own people?"

"That is simple enough. Since they are aliens, their minds will operate at frequencies dissimilar to those of our own. Since they are the only aliens within earshot, they will be easily identified. Listen! We're getting something!"

And this is what Kennek and Cidak got:

"Well, I hope we find something on this planet. I'd hate to have to face the underwriters with this thing a total failure."

The speaker was Eugene Connell, the first pioneer to venture beyond the confines of the Solar System, addressing himself to Captain Murphree, who commanded his space caravan.

"Looks kind of bad, Mr. Connell," was the reply. "We'll have to turn back pretty soon. The supplies are getting

WITHIN the speeding space ship, Pete West yawned violently

low. If we don't find something to take home from this planet up ahead, we will have to turn right around and head for home."

"Well, keep your fingers crossed, Captain. That looks like a pretty cold world, but if there's anyone down there, we can make it hot for them."

Kennek Vordoy switched off the loudspeaker.

"Did you hear that? They are definitely hostile. The thoughts of their leader threaten to bring heat to Sereia."

Cidak Vendro's purple face hardened.

"You are right. They do mean trouble. If we expect to hold them off, something must be done at once. I'll call the surface."

The Tripeds were not a warlike race, but they answered the call to arms as efficiently as the misguided followers of a twentieth century dictator. The newly prepared weapons of destruction were all set up and ready to function long before the approaching ship of the invaders came within the vision of the senses.

The telephone operator who received Cidak's call had merely removed his headset and turned to his immediate superior.

"A message from the Tower of Scientists, sir. They said that the alien ship will be visible to the naked eye in about seven minutes."

The message was quickly relayed. The range section plotted the course of the approaching ship, a sharp-eyed Sereian spotted it. A general tremor of excitement and long-dormant battle lust ran through the assemblage as the gunners trained their pieces on the invaders.

Cidak Vendro voiced the command. "Fire!"

CAPTAIN MURPHREE, aboard the space ship, had been making a correction in the log book.

"That's just about how she stands, Mr. Connell. Atmosphere, chlorine, with a fairly large percentage of the inert gases. Temperature, about fifty below, centigrade. We can get out and look around a bit but not for long. The atmosphere will chew hell out of the ship's hull."

"Of course. But what I want to know is whether any intelligent beings inhabit the place. We've covered the whole Solar System without finding any, and this is the only planet left on this system. I promised you that this is as far as we would go, but I hate to go back empty handed."

A buzzer sounded on the captain's desk. He tripped the lever on his desk set, and the voice of West, the Observer, issued forth.

"We've spotted some life, sir. -It's still too soon to say what sort, but we can make out a bit of machinery and some figures moving about."

The captain tripped another lever.

"Hello, Swenson. West says he can make out some activity down below. Check with him and set this crate down by whatever it is."

Eugene Connell wanted some action, and now he was going to get it. He followed the captain over to the observation port.

"Can we see them yet, Captain?"

The captain changed the focus of his telescope.

"Very faintly. Another couple of minutes and they ought to be pretty clear. Here, want to take a look?"

The brains of the expedition took his own place at the port.

"Yes, it is shaping up nicely. Say, look, Murphree. Those people are almost human. Round head, well proportioned torso, but look at those legs. Three of them. But human. We've found humans after all."

The captain took another look.

"Human in a way, yes," he said, "but I'd call them aliens. Nothing human could live at fifty below in a chlorinated atmosphere. Wonder what they're doing with those machines? Seem to be searchlights of some sort."

Pete West rushed into the room without knocking.

"Hey, Captain, those monkeys down there are turning some kind of a beam on us. What do you want me to do, drop a bomb on them?"

Before the captain could answer, the desk set buzzed again.

"Those creatures are running some kind of a ray on us. We are trying to analyze it for you now. Here's Doctor Rennie, he has something."

A new voice broke in: "That you, Captain? Here is some dope on that beam. It is some sort of a heat ray. Brings the temperature up to about thirty degrees, about our body heat."

"Well, Mr. Connell," announced the captain, "it looks as though we are going to get a royal welcome. They seem to be trying to warm things up to a livable temperature for us."

"So it would seem. There must be considerable intelligence down there. How else could they have known our body requirements? Now, if they could only dig up a little breathable air—"

KENNEK VORDOY rose from the telepathic detector.

"Call Cidak Vendro," he demanded of an underling.

The counsellor of the Emperor found the old scientist with a case of nerves.

"Well?"

"You will have to do something at once. These aliens are heading right for our emplacements."

"So. But what will that avail them? Before they get there, they will be reduced to ashes. We have been playing the heat rays on them for the last half hour. The ship should be out of control by now."

"That is just why I called for you. I have been listening in again. Our rays are not bothering them at all. From what I have been able to gather, they must come from a very hot world. The scorching heat of our death ray is slightly lower than their body temperature."

Cidak Vendro waited to hear no more. He turned and dashed madly from the room, calling plaintively for his generals.

"We will have to let them land," he announced. "Our heat rays are ineffective. When they leave their ship, we'll turn the oxygen projectors on them. All we can do is hope that they are effective. If that fails to stop them, we will just have to surrender."

The huge ship from out of space checked its speed to cruising speed and started to circle for a landing. It hovered over the fortifications of the Sereians and came to rest on the barren plain about a mile from the camp.

"I suppose it is up to me to go out first."

The captain closed the port of his space suit and stepped into the air lock. Connell and the rest of the crew, except for a skeleton squad left behind, followed him at intervals. Pete West closed the inner door and opened the outer panel, and the explorers stepped out onto the alien soil of Sereia.

"Is your radio working okay, Mr. Connell?"

"Yes, Captain, I can hear you perfectly."

"All right. Then I guess we might as well head for that bunch of machines up ahead."

They labored along for a time, their movements impeded by the heavy space suits as well as by the increased gravity of the green planet. They were still a good half mile from their goal when the hitherto still air started to act up.

"Seems to be quite a wind," the captain panted.

"Odd," commented Dr. Rennie. "You can almost see the currents of air. See. Seem to be waves of a colorless gas dissipating the normal chlorine atmosphere."

"Yes, I can see it now," Connell broke into the conversation. "You can see the green of the chlorine being driven from all around us. Look ahead. It seems to be coming from a battery of those machines."

"Well, I'm going to find out what it is," decided Dr. Rennie.

HE opened the port of his suit, took a cautious sniff, then inhaled deeply.

"Seems breathable enough. Could be pure oxygen—it's practically odorless and has a distinctly exhilarating effect."

He produced a match, which he scratched on his helmet. The splinter flared up with a bright bluish-purple flame.

"Yes. That's what it is. Oxygen, without a doubt."

"That settles it," said Captain Murphree. "They're not only intelligent but they're actually friendly. Imagine the perception they must have to heat up the place and purify the air for us."

"In that case," announced Connell, "this trip has not been entirely in vain. Here we have found the intelligent race we have been looking for. I hope I can persuade a few of them to come home with us. That'll be something to make the world sit up and take notice."

The band of explorers increased their pace toward the embattlements of the Sereians.

"They are still coming on," a general faltered to Cidak Vendro. "What do we do now?"

"If all of our weapons have failed, there is only one thing to do—sue for peace. Cease firing." This last was a command.

In unison, the heat rays stopped playing on the approaching aliens. The gas projectors gave a last cough of submission. The defenses of the Tripedes were stilled.

Captain Murphree, leading the party, halted abruptly. "Getting chilly," he said. "My vision port is frosting up."

"Mine too," Connell muttered. "There's something funny about this. Those natives have turned off their rays and they aren't sending any more oxygen our way. Do you suppose they've exhausted all their stores in their effort to be neighborly."

The captain cut in:

"I'm afraid we can't be neighborly enough to pay them a call. The space suits aren't built to keep out this much cold. We'd better head back to the

ship while we can. If we stay out here any longer, we'll wake up dead from frostbite."

They hurried back to the ship. Soon they had left Sereia behind them.

CIDAK VENDRO once again bowed low before the presence of his Emperor.

"Sir, the enemy has been repulsed. They had us worried at first. Our heat beams were absolutely useless. If the scientists had not come through with the poison gas, I hate to think what might have happened. It seemed to be slow in its effect, but, when it took hold, they were beaten."

"Is that so?" the Emperor contemplated. "In that case I will have to make a slight change in my plans. I was under the opinion that the scientists had outlived their day of value. I was going to quit supporting them. The people are all crying for a balanced budget, you know. But I am convinced that we still need them. They will be around as long as I am."

Kennek Vordoy arose from his long vigil at the telepathic detector. This time he smiled to himself. This was the first time he had ever presumed to listen in on the thoughts of his ruler, and what he had heard pleased him. He was no longer worried about his position. He knew that the scientists could protect the green world, for the green world was its protection.

In the Current Issue of Our Companion
Magazine of Science Fiction

STARTLING STORIES

THE THREE PLANETEERS

A complete Book-Length Novel of
Tomorrow's Daredevils

By **EDMOND HAMILTON**

WATERS OF DEATH

By EANDO BINDER

Author of "The Jules Verne Express," "The Impossible World," etc.

A DEJECTED human figure stood in the lonely wastes of Titan, Saturn's sixth moon, under the ringed planet's moonlike glow. The air was thin, but life-supporting. The surrounding vegetation was thorny and tangled, almost as difficult to work through as barbed wire.

And that had proved "Lifer" Pete Larn's downfall. Thrusting through the wild vegetation, trying desperately to put as much distance between the prison and himself as possible, it had happened. A whiplike vine had snared the neck of his water canteen and ripped it cleanly from his belt. His body had jerked half around and he had fallen, stunned. Then an ominous gurgling sound propelled him to his feet.

It was his canteen—spilling! But by the time he had found it, parting gnarled thorns that drew blood from his hands, the last drop of water had oozed into the soil, vanishing!

Larn kicked at the bushes with his

heavy boots, swearing blackly. Rage consumed him, a greater rage than even the murderous frenzy that had driven him to kill two men, on Gany-mede. He trampled the bush flat.

Then he calmed. And with the calm came—fear! He had another five hundred miles to go, two weeks' travel at the least, even in Titan's light gravity. Two weeks—and without water! A man could go that long without food, but water was essential. Especially in this arid atmosphere that seemed to suck moisture out of his body. It never rained on Rhea.

There was the river, whose course he was following. But one did not drink of Titan's rivers. A picture loomed unbidden in Larn's mind, like an evil specter. The face of the last man who had tried to escape. After only a month in the prison, this man had made his break, scoffing at the tales of poisoned waters. A search party had brought in his body a week later—bloated, twisted by terrible convulsions. And the look that was stamped on his face was one of haunting insanity!

The waters of Titan were, and had always been, impregnated with some dread ingredient, a diabolical natural drug that first brought intoxication and then death, in swift succession. The prison's purifying plant extracted all but slight traces that left only a mildly bitter taste.

Larn stared at the empty canteen that gaped mockingly. Go back? Back to lifelong imprisonment in the grim jail from which he had escaped?

"No!"

He shouted the word defiantly. He had planned this too long—five years. He had made the canteen bit by bit, with scraps of sheet metal garnered from the prison's machine-shop, soldering them together over a candle



Pete Larn

flame in his cell, with pellets of lead. The rest had been comparatively easy, since he had planned so thoroughly. A guard quietly strangled, who had entered his cell to investigate Larn's pretended moaning.

A quick trip to the main water supply, in the guard's uniform, to fill his improvised canteen. Finally escape over the wall, boldly walking past a guardhouse, protected by the shadows of true night, when both Saturn and the sun had set.

By dawn, when the weak sun had spattered anemic sunlight over the dreary satellite, Larn had put fifty miles between himself and the prison. They would never find him now. It had all worked perfectly up until this moment. But now . . . he kicked at the useless canteen that had been his symbol of freedom. He'd go on. He'd make it somehow.

TITANOPOLIS, mining city, and its space docks lay five hundred miles eastward. There, in its somewhat lawless quarters where hard-bitten spacemen drank and gambled, he could easily ship aboard some freighter, no questions asked.

Pete Larn tramped along, still following the narrow river that he knew led straight into Titanopolis. He eyed the water and shuddered. He'd never take a drink of that!

But five days later the pangs of thirst arose, and became a growing torture. Hourly his torment increased, and he knew then, in the back of his mind, that he could never reach his goal. His eyes kept turning to the lure of the softly coursing river nearby.

The water sparkled invitingly in the sunlight. But within it lurked dissolved madness and death! "Moon of Intoxication," Titan was often called, for dissolute spacemen added a drop of its waters to their liquors to revel in its extraordinary intoxica-

tion. More than a drop brought death.

Larn cursed bitterly through parched lips as he staggered along. A haunting phrase came up from his youthful reading—what was it?—"Water, water everywhere, but not a drop to drink!"

He knew he was going mad. Beads of sweat trickled from his brow as he pushed through the wiry plant-growths, and drop by drop his body was being drained dry. His throat was raw torture. A horrible, unwanted thought hammered in his dazed mind—one little drink! One little drink wouldn't hurt! How sweet it would taste. . . .

With a little shock, he suddenly found himself at the river's edge, kneeling in the mud. An alien force seemed to have gripped him and was forcing him to bend his head toward the water. Some part of his mind had snapped and had gained control of his body. Drink! He must drink!

"I won't!" he screamed, breaking from the mad spell. He jerked the gun from his belt, the gun of the guard he had strangled. He pressed the cold muzzle against his temple. Better the quick death than the lingering one of intoxication, insanity, and final convulsion.

The shot rang out sharply and Larn's body slumped on the river bank. . . .

The two guards who found the corpse, a day later, shook their heads, standing over it. "Little did Larn realize," said one, "how close he was to succeeding! If he had taken a drink, he would have been saved!"

The other nodded. "He knew that the prison-water has minute traces of Titan's poisonous waters. But he didn't know that, after drinking it for five years, he was naturally immune to the concentrated quality of the river's waters. And it's lucky for us none of the other prisoners have yet guessed that fact!"



A SPECIAL FEATURE OF INTERESTING ODDITIES

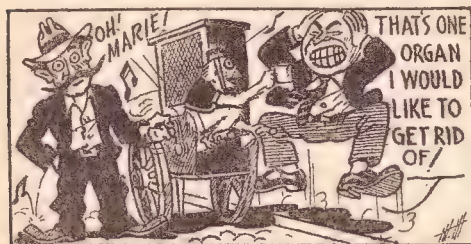
By MORT WEISINGER

ORGANIC ANTIQUES

MAN is a walking museum!

There are at least one hundred organs in the human body that are absolutely useless—but which were once very necessary to early man!

In the corner of each eye there is a remnant of a third eyelid man once needed to keep his eyes clean. The pineal body, in the upper surface of



the brain, is retrogressive in modern man. Yet science tells us that once, in a developed state, it served as a third eye! Man has ear-moving muscles which have no function—but at one time in his ancestry he had to use these muscles to help move his ears, and so catch sounds.

Wisdom teeth are no longer essential; our appendix is of no use today. These, and several score other "vestigial" organs, still exist in our bodies—even though these spare parts are nothing but relics!

DEATH FOR SALE

THE most deadly germs known to science can be had—at a price!

Virulent, murderous microbes that cause such fatal maladies as bubonic plague, typhoid fever, tetanus, or any one of a variety of other human scourges, are available at reasonable prices from a strange test-tube bac-

teria farm maintained by experts at the Georgetown University Medical School, in Washington, D. C.

However, only registered physicians and qualified scientists are permitted to buy these living wares that cause death. Scientists require the deadly microorganisms for research work, sacrificing hordes of the microbes in the quest for a cure.

It's millions of germs for defense!

IT FLOATS THROUGH THE AIR

WATER can float on air!

There is a place on Earth—or rather in the Earth—where water can actually float on the air! That place would be in a vertical mine shaft, about thirty-five miles below the Earth's surface. For the pressure of air increases proportionately with depth. Thirty-five miles beneath Earth's surface the air would be about one thousand times as dense as that at the Earth's surface. Such air would be heavy enough to float light woods as balsa—and even water.

A COLD FACT

YOUR left hand freezes more quickly than the right!

Have you ever noticed that your left hand gets colder sooner than your right one? Have you ever wondered why, in the cold climate, frozen fingers occur most frequently on the left hand?

The answer to both these questions is found in recent researches conducted at the University of Vienna by Dr. Richard Wiesner. By measuring the size of arteries in the right and left arms of great numbers of cases, he found that in almost all cases *the artery in the right arm was much larger than the corresponding artery*

in the left arm. Hence the hand on that side has better circulation and is not so likely to feel the effects of the cold.

SAYS YOUR HEART

TAKE a lesson from your heart!

That's more than the name of a popular song, at least when modern biological science is concerned. For



heartbeats, recorded on phonograph records and amplified by loudspeakers, form one of the latest aids to studying cardiac ailments.

At a prominent medical school specialists are using the "canned" heartbeats for teaching and research as well as for diagnosis in individual cases. When employed in instruction, the records can be played at will to show how various ailments of the heart sound through the stethoscope.

But they haven't yet been able to detect any difference in the sound of a love-sick swain's broken heart!

THE SIXTH SENSE

BATS have a sixth sense that defies scientific explanation!

For centuries the world has been using the simile, "As blind as a bat." But that term is mistaken! For bats have efficient eyes, and their vision is quite normal. Not only that—they can see without their eyes!

Some secret sense organ of the bat is so super-keen that, blinded, it can detect any object in its vicinity. This fact was illustrated by the celebrated experiments of the scientist, Spallanzani.

He blinded bats with varnish, stuffed their noses, coated their entire bodies with thick jellies, and plugged their ears with cotton. Then he let the bats fly around in a small chamber criss-crossed by taut strands of silken threads and dangling wires.

The bats avoided each of the obstacles with the greatest of ease. They expertly dodged each and every one of the many unseen obstacles. They turned corners, found holes for escape or concealment, and behaved as though eyesight were quite unnecessary.

Stoppage of the inner canals of the ear, however, made them lose some of their uncanny control—and that's where the secret of their amazing powers may be locked, modern science suggests.

PENNIES FROM HEAVEN

THERE'S money in the stratosphere!

Scientists intent on studying conditions in the upper layers of Earth's atmosphere regularly send up pilot balloons of a few cubic feet capacity. These little balloons, filled with hydrogen, ascend far up into the stratosphere—but carry along with them automatically recording thermometers, barometers, etc.

These little balloons may float gently to the ground as the gas leaks out of them. If the sun's rays cause them



to explode, then a small parachute opens and brings the instrument cage back to earth, a clever shock-absorbing device preventing damage.

A stamped, addressed label offers the finder a financial reward if he will forward the label to the place of origin and retain the cage safely until it is fetched.

Happy landings!

THIS INCREDIBLE EARTH

WHEN glass breaks, the cracks move at a speed of nearly a mile a second. . . . There should be about 2,350,000 grains of sugar in a pound when you buy it, judging by a report

that one grain of sugar weighs 68 ten-millionths of an ounce. . . . Only one animal in the world sheds a horn—the American antelope of the Great Plains. . . . In 6,000 years, 24,000 generations of mice are born—but only 200 generations of men! . . . In constructing a stratosphere balloon every pound that can be saved in weight enables the balloon to rise about 15 additional feet. . . .

Pigeons cannot hear human voices. . . . Cow's tongues have five times as many taste buds as human tongues. . . . Armies of traveling caterpillars, estimated to be eighty miles long and thirty miles wide, have been known to

stop trains in Australia and New Zealand! . . . There are 27,000 light bulbs, 40 miles of wiring, and 500,000 connections in the spectacular animated electric sign which advertises products at Times Square. . . .

A house-fly walking for a distance of a single foot up the wall dissipates enough energy to make a modern radio set give an audible signal for at least ten years! . . . If all of the people in New York City talked at once, the sound converted into energy would not be sufficient to brew a cup of tea. . . . Most of us, if asked to guess the passage of a minute, stop at around 35 seconds. . . .

HEADLINERS IN NEXT MONTH'S ISSUE

CLARK STANTON'S code demanded that he observe the laws of Earth. His father's heritage commanded that he break them. For Clark Stanton, Terrestrial Secret Agent, was the son of "Blackie" Stanton, the most notorious space-outlaw the Solar System has ever known!

Thrill to the star-spangled course of Clark Stanton as he stalks the Citadel of Science in **DOOM OVER VENUS**, a light-year-a-minute story of mystery and romance on the cloud-veiled world. It's a complete novel of the future by EDMOND HAMILTON, with a cavalcade of interplanetary surprises in every chapter. **DOOM OVER VENUS** is featured in the special scientifiiction section of the February **THRILLING WONDER STORIES**—with illustrations by Paul!

* * *

I943—and the world's greatest scientific experts are baffled by a sudden strange series of biological phenomena. . . . A white buffalo born in the St. Louis Zoo. . . . Hundreds of giant wasps flying over New York . . . The appearance of pterodactyls over Tokyo . . . Six-legged rabbits . . . Flying snakes.

Evolution goes haywire in **DAY OF THE TITANS**, a complete novelet by ARTHUR K. BARNES, also scheduled for the next issue. It's a remarkable story of the freak who saved the world!

* * *

WHEN the sun grew cold humanity built an ark of space and headed for a new home . . . a home beyond the stars. On and on through the galactic gulf sped the cosmic ark, consuming hundreds of years in the journey. And finally Earth's sole survivors reached a habitable world—Nova Terra.

But the small band of mortals destined never to see Earth again found a great civilization on Nova Terra . . . a race representing the ultimate in science. They found—the Lightning Men!

THE LIGHTNING MEN, a novelet by JOHN COLEMAN BURROUGHS and HULBERT BURROUGHS, is a dramatic sequel to "The Man Without a World," featured in our recent Tenth Anniversary Issue. You requested the sequel—now here it is! By the sons of Edgar Rice Burroughs!

* * *

CAN a robot think? Has a robot human emotions? A man-made robot tells all in F. Orlin Tremaine's delightful short story, **TRUE CONFESSION**, also included in our next issue. It's an ironical story of an iron man.

* * *

OTHER five-star fantasy stories in the February issue of **THRILLING WONDER STORIES**. And look for our regular parade of exclusive features. **SCIENCE QUIZ**, **SCIENTIFACTS**, **IF**, **THE STORY BEHIND THE STORY**, and others—they'll all be with us, bigger and better! And don't forget—there's a long, complete scientifiiction novel in every issue of T.W.S.!

the DAY of the CONQUERORS



by
MANLY WADE WELLMAN

• SPECIAL SCIENTIFICATION NOVEL SECTION •



Arla

When space ships visit the stone age, prehistoric man wages a grim battle for the survival of the fittest on the brink of time's dawn!

PROLOGUE

HOW do we know that this world cannot be visited from beyond space? How do we know that it has not happened already, far back in the darkest hour before history's dawn?

The Chinese tell of an antiquity when a giant and flaming dagger—the very pattern of a space ship—dropped from heaven and disgorged conquerors. The Greeks once worshipped a father of gods who hurled thunderbolts like javelins. There are a myriad of tales concerning enchanted strongholds, grotesque scoundrels who owned flying carpets and magic missiles, winged dragons and strangely powerful Jinni, and living monsters of stone, brass or iron.

But there is another side to the picture. There are the glad memories of heroes and princes who invaded these unvanquishable fortresses, outwitted these bizarre enemies, learned their deadly secrets and turned them against their wielders, with the result that man lives and prospers unthreatened today, free to make his own magic by science—science that has raised him to the throne . . . and may yet, through misuse, hurl him into the pit.

Are these old legends real evidence? Did they begin with the day of dread when strangers came from a far world to settle and conquer this one, routing and almost destroying the human race in its youth—only to be checked and defeated by some paladin of daring wisdom whom we remember as Ulysses, St. George, or Jack the Giant Killer?

Maybe. . . .

CHAPTER I

The Pioneers

THE ship that dropped down out of the sky was a gray-gleaming torpedo of metal, driven and guided by rocket blasts. The dozen who made up its crew were of the System's most advanced race, and themselves the leaders of that race. Their star-spanning craft bore witness to that leadership. They had sailed from their own world, the world that was fourth from the sun, the

red planet. Now, with diminishing speed, they were approaching the planet that circled just to sunward of them.

The Martians were a frail-looking lot, a fact consistent with creatures of a light-gravity planet like theirs. Their bodies were narrow and soft, and their arms and legs of a sticklike length and slenderness. But their eyes were bright, and their craniums swelled impressively above their skull-thin faces with sharp, toothless mouths and long snipe noses. Their color was a dark red, like baked clay, and they wore close-fitting garments of metallic weave.

While the commander steered, the others gathered about a great telescopic vision-screen, studying the new green world to which they were voyaging.

"It has much water, three times as much as land," computed one. "Vegetation, large and small, covers everything. Life is rich here."

The others thrilled to the report. Their own planet was dying, a globe almost empty of air and water. Their hunger, their thirst, had driven them to hunt a new home for their race. Here might be that new home.

"Look for animals," spoke the commander from his steering levers.

They did so, questing here and there with the point of vision. At last, focusing by means of many dials and gauges, they could see one creature of the new planet. It was massive, mighty, its body covered with shaggy wool and supported upon four pillarlike limbs. Its mouth sprouted two great white teeth, and between those natural spears the nose sprouted into a wriggling arm or tentacle.

They looked upon the mammoth, which observers of today know only by its fossil bones. Interest and apprehension mingled in their minds. Ages before, the last wild creature had died on Mars, where every square foot of habitable ground, every breath of oxygen, every mouthful of food or water, was needed for the dominant race.

"A mighty beast," said the observers to each other. "Cunning, too—see how big its skull is, and how it uses that twisting member like a hand. It might be dangerous."

"Not to us," pronounced the commander arbitrarily. "We have the power to defeat

it—and use it for our own purpose.”

The group around the vision screen sought another viewpoint, focused upon another scene of life. Several beasts could be seen this time—a lithe, tawny mother at the dark door of a cavern, cradling two cubs between her forepaws and licking them affectionately, while a male, thickly maned on throat and shoulders, stood guard over them. It was a family of cave-lions such as once roamed young Earth, carnivora beside which modern lions would seem small and timid.

“There is real ferocity,” commented one watcher. “See how Nature has made that thing of muscles and fangs and claws. It could strike as swiftly as lightning, almost—and as fatally.”

“A natural machine of combat,” agreed his companions.

“Yet our artificial machines have outdone nature,” spoke up the leader drily. “Do not fear any blood-drinking brutes. We can do with them what we wish.”

THEY turned their peering view-mechanism elsewhere, studying birds that flew. This latter fact reassured them that their own flying machines could travel in this heavy atmosphere. They noted monkeys playing among bright green foliage, herds of antelope, a lumbering cave-bear, a giant snake.

At last they came to the landfall, in the center of a gently cupped green valley. Leaving his controls, the commander moved to a gauge and quickly checked its figures.

“The air is good, full of oxygen,” he reported. “Open the hatch, and we will emerge.”

No sooner had they quit the zone of the ship’s artificial gravity than they gasped and staggered—the new world exerted almost thrice the pull they had known at home. But the more bracing, oxygen-rich air helped them to make the required effort, to overcome this unaccustomed environmental feature.

They proceeded routinely to make a fortress. One Martian, with an atomic blast-control, walked heavily in a wide circle around the ship, turning the nozzle of his mechanism against the ground. It churned up the earth into a great red-brown bank, which he shaped by skilful manipulation of the blast-control, and drew into existence as swiftly as he walked. Displacement of atoms, within planned limits, made such earth-sculptoring quick and sure.

Meanwhile others, exerting their stringy muscles against the threefold gravity, were joining together the parts of a flying machine, with a closed central gondola in which a pilot could sit forward and two observers aft. It had planes jutting to either side, a rocket engine for propulsion, and a destroying flame-ray at the front.

Three were told to board the machine and go off exploring. The others worked to finish the earthen rampart, and to raise shelters inside it. The shelters took longer and finer work with the blast-control, but the commander would not rest until they were finished.

“From the looks of this sky, and the sam-



Vwil, the Martian

ples of the atmosphere, we may have storms,” he pointed out. “They could do us more harm than any strange beast, or combination of beasts, on this planet.”

He had picked up a length of stick, to help support his heaviness in the new gravity. He walked to where one of the adventurers, the youngest, was bringing out and assembling with a wrench certain strange bits of machinery. As this work progressed, it took a form like that of the Martians but heavier—a body, two legs, two arms, a cylindrical head that bore a foggy-lensed lamp instead of a face. It was a robot.

“Vwil,” said the commander, “you are meditative.”

The young Martian addressed as Vwil lubricated the joints of the completely assembled robot, then pressed a switch in its body. The metal image came to life, moving stiffly but surely, like a Martian in armor. Vwil handed it the wrench and pointed silently to the interior of the space-ship. It moved away understandingly, brought out armfuls of new parts, and began building them into other robots.

MEANWHILE, Vwil faced his chief. His features, though thin, were fine-cut and responsive, and lacked the hard determination of the other’s.

“I was wondering,” he said, “if there were not creatures like us on this planet.”

The commander’s harsh mouth screwed into something like a smile, and he shook his head.

“No, Vwil. Nothing so close to your romantic dreams. We have observed no cities, no machines—”

“Are cities and machines everything?” broke in Vwil, not so courteously as he should. “I see this world as a great garden, full of good things, as our own was in the beginning. Perhaps there are fellow-beings, not as wise as we, but good and kindly—”

The commander interrupted. “Senti-

mentality is not good, Vwil. We outmoded it many generations back, and it does not fit your otherwise fine scientific character. Least of all is their place for it here. We are overcrowded and underfed at home—we are here to explore and establish a colony, not to dream."

He paused a moment, musing.

"Yet you give me a thought. There may be animals here who approximate us—walking upright on two legs, with deft forelimbs like hands, and a considerable brain-case at the top. If so, they may prove most useful." He scrutinized the robot, which was working on yet another replica of itself. "More useful even than those things of metal and motor."

"You would enslave such unhappy beings?" suggested Vwil.

The other sneered.

"Do not torture yourself with dreams of how unscrupulous I am, until we know that there is such an animal—a two-legged entity, similar to us in shape, and of good potential intelligence."

Vwil patently wished there would be nothing of the sort, for the commander's attitude was of one who planned ruthless miracles.

The two did not know it, but even as they conversed, a tall biped, shaped like the Martians but along more powerful lines, was skirting a waterside not far beyond their horizon.

CHAPTER II

The Defier of the Gods

HE was blue-eyed, that specimen, and his shaggy hair was black. Despite his great length of limb and body, he was broad only where it counted most, in shoulders and hands. The bright sun he worshipped as a god had tanned all of him save where buckskin girdled his loins and sandals shod his feet. His face—broad-browed, square-jawed, straight-nosed, ready to smile—was clean of beard, as befitted a young bachelor of his people. His name was Naku, and he belonged to the Flint Folk—the tribe of hunters and fishers who dwelt in a village of wattle-and-daub huts under a lakeside bluff, and chipped beautiful tools and weapons from stone.

His name meant Lone Hunt. It signified that from boyhood he had preferred to play and adventure by himself rather than with the shrill naked rabble of other children. Now, as a young man, he still liked solitude. Neither sullen nor timid, he was yet reserved and meditative.

He might have become a priest, but the Flint Folk had begun to turn away from the sun-worship to which they were bred, and Naku scorned the new cult of the Thunderer—the more so because two years before, that surly deity had sent a storm and sunk the canoe in which his father and mother had been paddling on the lake.

Naku was a mighty stalker of game and shooter of arrows, the swiftest runner and the fourth best wrestler in the village. Secretly he hated the Thunderer for killing his

parents, and often dreamed of vengeance.

Just now, following a deer-track along the lake's margin, he reviewed in his mind all he had heard of the angry, bloodthirsty Thunderer. The fat lame priest, Ipsar, said it was like a great eagle, but larger and more deadly. Only Ipsar had seen it, and Ipsar preached terrifyingly about its powers and anger. But he, Naku, would never worship—might even find a way to make war against—

What Was That Shadow That Fell Upon Him?

Even as the great bulk blotted the sun from him, Naku dived sidewise from the beach into a reedy thicket, like a frog into water. His hunter's instinct told him that the thing lived, flew like a bird—but was far bigger than any bird or beast he had known. From his place of hiding he glanced up, at great motionless wings, a gleaming body, and a quivering tail-like stream of smoke. The creature had a voice, too, a rhythmic rumble like the deep song of a locust. This much Naku noticed before the thing whipped out of sight beyond the horizon, as swiftly as it had come.

"Who!" said Naku, and came into the open. He had seen the Thunderer, heard it. Old Ipsar had foretold something of that sort for unbelievers—the fierce god would appear and strike them dead. Musing thus, Naku felt relieved. It had come for him, but had failed to strike or seize him. His dash to cover must have baffled it.

A new doubt rose. If the Thunderer could fail, it might not be a god after all. No, only a dangerous monster, like the dragons of old, of which grandsires told children, the beasts that had fought and frightened the ancestors of the Flint Folk.

Such a thing would be fought against, perhaps killed. Naku looked to the arrows in his otter-skin quiver. He set one to his bowstring and moved forward, warily but steadily. Forgetting the deer he hunted, he left the lake shore and struck through the forest in the direction taken by the flying thing. He moved swiftly, cunningly, between trunks of maple, beech and oak. After trotting many bow-shots of distance, he came to the edge of the woods, at the brow of a hill. Beyond was a valley he knew, shaped like one of the clay saucers which the Flint Folk knew how to model. From behind a spray of willow shoots, Naku peered out.

HE frowned. Did he know this saucer-valley, after all? Surely it had been only a green round dip, with a pond at bottom. Whence had come those strange lumps and ridges of red-brown stuff, like clay gigantically moulded and baked? It was—yes—it was a village, a fortress, made here of earthy materials. Within an uneven curved compass of walls or dikes, rose the round and conical tops of buildings. And lights flashed from the hidden inner court of the enclosure, and smokes ascended, smokes colored brown, slate-blue, blood-red, black. Naku sniffed. Those smokes were of unpleasant pungency.

Meanwhile, just outside the walls, the

great flying mechanism that Naku fancied was the Thunderer had come to rest.

He peered and appraised. The big bird must live here, and indeed it was doing a most domestic thing—laying eggs. He saw objects issue from within it, two of them. But not eggs. These moved, they were alive. Baby birds? No. Animals? None that Naku knew. Men? Well, they might be men.

They were shaped something like himself, but were gaunt, scrawny, like rude figures scratched on a board or bone with single marks for limbs. Their heads were long and puffy, like very ripe gourds, and had no hair. Their skins were colored a deeper, warmer red than the walls they approached, and their eyes were large and round and green, with snipe-noses and thin mouths.



Naku, the Human

Except for those heads, and their spidery hands, the creatures were sheathed in tight, shiny clothing.

As Naku watched, the new mysteries moved toward the red-brown wall. A round opening appeared, like a cave-mouth from which a stone is rolled away. They went in, and the hole closed. For the first time, a man of Earth had seen an automatic door-panel in use. Only the giant flying thing, grounded and silent, remained outside.

All these things were strange, without precedent in Naku's experience, but he did not let his wonder paralyze him.

"It is more and more like the strange tales of the grandfathers," he told himself, "tales of beasts that speak, of dead warriors' ghosts that come at night to foretell the future, and other things. This is like such a story," Naku decided sagely, "but, instead of hearing it told, I see it happening. Men who see such things become great and strong if they can profit by what they see."

Thus heartened by his own reasoning, he studied the situation capably.

"The Thunderer has built a home here," he concluded. "He is an enemy—and, I think, not a god. I shall kill him."

Stepping into the open, he aimed his arrow. With a sudden skilful flexing of all the proper muscles, he drew that arrow to the head and released it. The flint-tipped shaft yelped in air, flew across the valley like a little flying serpent, and struck its mark fair in the gleaming flank.

The monster seemed to speak, with a voice such as Lone Hunt had never heard—like the ringing of a water-drop in a pool, but unthinkable louder. Naku's people knew nothing of metal. Naku was having new experiences indeed. He felt a thrill of exultation, for the echoing ring of the plates must be the cry of a wounded creature.

Setting a new arrow to string, he watched. A great hole had appeared in the forward part of the body, and something moved there. Lone Hunt sped his second arrow straight for and into that hole, and the movement checked abruptly. A new sound drifted forth—a wailing sigh, as from a severed throat. Lone Hunt grinned. He was conquering the Thunderer.

BUT, at the new cry, the hole reappeared in the wall. Out scrambled two of the twig-thin creatures, perhaps the same pair that he had seen before. They hurried to the forward orifice, and hauled into view a companion. That companion lay still and limp, and from its high skull jutted Naku's arrow. The two living things examined the corpse and the shaft. Even at that distance, they seemed agitated.

Naku flourished his arms.

"Hai! Hai!" he yelled defiantly. "I killed him, I—I—I! The Thunderer blew storm and drowned my father and mother. I, Naku, take vengeance."

The creatures turned toward him. One was handling something that gleamed and twinkled, a short rod the length of Naku's forearm and as thick as his two fingers. From this bright object suddenly belched a greater brightness—a flash of lightning, surely, that leaped clear across the intervening space at Naku.

But he had expected some sort of assault, a charge or a hurled missile. He fell flat on his face, and just behind and above him he heard a crackle of fire. The trees kindled to that beam of light, which cut through the space just occupied by Naku's own torso.

The hunter cursed, scrambled well to one side, rose behind a bit of scrub and launched yet a third arrow. It struck the skinny chest of the ray-wielder, and he collapsed across the body of his dead friend. The light switched off. The surviving stranger bundled himself frantically into the forward opening of the Thunderer, and the shiny shell closed up. Naku felt himself master of the field—the Thunderer struck dead, and two of its mysterious children—

Wait! The Thunderer was not dead! It rose from the ground, swooped toward him!

Naku did not fear greatly. He thought that he could spring into the woods, where that immense soaring mass could hardly follow him.

But the Thunderer, too, wielded the lightning, it flung a burning white flash at him. Naku, retreating among the trees, felt them

spring into fire around him. He himself was saved because he shrank behind a big gnarled oak—the other side of it blazed up in the moment he stayed. Springing sideways, he ran and ran. Chance brought him to a creek which flowed lakeward. His mind struck the saving equation for him—the enemy fought with fire, and he, Naku, would protect himself with water.

In he splashed, and none too soon. He swam down to the muddy bottom, and heard dully a great swishing gasp—the ray of hot light was drawn along the surface of the water, turning it to steam. The creek heated unpleasantly in that brief moment before the ray left it. Naku swam as far as he could on the bed of the stream, came to a wide pool, and cautiously peeped out.

He could see the flying monster high up, hovering in place and probing the forest with its ray, as a boy stirs grass with a stick to find a hiding lizard. Flames darted above the treetops everywhere, and this was no place for a man whose bow had been ruined by water, anyway. Naku swam swiftly but silently with the current, came to shore a long bowshot ahead, and ran back the way he had come.

He paused once more on the shore of the lake, near the spot where he had first seen the Thunderer in the sky. Glancing back, he found that his enemy had flown away, but the forest roared with the fire it had kindled to destroy him.

Naku, swiftest racer of his tribe, outdid himself in the flight for home.

WHEN the flying machine returned to the Martian camp, there was a grim council.

"Two killed out of twelve, and by one primitive animal with the crudest weapons," summed up the commander bleakly. "And he got away." His gaunt, hard features seemed turned to carved wood. "I am not pleased."

"We did not know of attack," protested the one who had flown after the raider. "Anyway, I set the forest afire. He will not survive that."

"I am afraid that he has already escaped, and warned others," replied the commander.

Vwil spoke up. His face was calmer, gentler, than the others. "Perhaps, if he understood that we meant friendship—" he began.

"Do not speak for everyone, Vwil," snubbed the commander. "This is war. If the creature escaped, he will bring others of his kind. We will prepare for that."

He turned toward the knot of new-assembled robots, fixing his eyes upon them. He did not speak or gesture, but their delicate receiving mechanisms understood and obeyed his thought-impulses—they came toward him, a full score of silent metal men, each with a glowing face-lamp that gave off pulsations of white light. At his unspoken will they moved quickly to the space-ship in the center of the stockade, and entered. They emerged with a variety of weapons.

"I still hope—" began Vwil timidly.

"It makes no difference what you hope," the commander snapped. "If we are to be safe here, we must be masters. These sav-

ages are intelligent, brave, warlike. We must teach them a lesson, in terms they understand."

The others nodded agreement—all save Vwil. He was deep in thought.

CHAPTER III

Battle

AT home, on the sandy, hut-studded level between lake and bluff, Naku was talking more loudly and passionately than any had ever heard him. First he thrust himself upon Rrau, the war chief, and began to fling earnest words at him. Others, curious, came around, and what they heard caused them to beckon still others. As the men of the tribe poured from their huts and thickened into a big audience, Naku ceased his talking to Rrau alone. A great log lay at hand, and he sprang upon it, raising his voice so that all might hear.

"Men of the Flint!" he addressed them. "I come from seeing marvels. The Thunderer nests near here, it hurls fire upon the forest and threatens to kill us all! With it come, strange creatures, like ugly dreams of skinny men, who attack good warriors, but who can themselves be killed!" He paused, and an amazed murmur went up. "I have seen the monster, and have shot arrows at the men-things it spawns—I have killed two!"

The murmur died. All gazed aghast at the comrade who had dared face and defy the Thunderer. Those nearest him moved away, and Naku saw and laughed.

"You are afraid that I will be struck with the Thunderer's lightnings? You do not want to share that death? But I was threatened and escaped. It hurled fire—and missed! Men of the Flint, my friends and brothers, this Thunderer is no god. He is only a dangerous and evil monster, and must be killed."

He glanced shrewdly around. Here and there he saw a bright face among the dark ones, a face suddenly touched with hope. Others of the Flint Folk disliked the Thunderer worship, yearned like himself for the return of service to the warm, beneficent Shining One, the sun. One such face was that of Rrau, the war chief. If the brave and popular leader should join his voice to Naku's. . . . But here came hobbling a fat, excited figure—Ipsar, the priest who led the new cult of the Thunderer.

Ipsar was the only man of the village whose life was so soft and easy that he could grow fleshy. He wore a great red beard, like the lightning itself, braided into two plaits. His body was clad in a deerskin skirt and jerkin, and painted over with mystic jagged symbols. Around his neck were looped great chains of bright pebbles and shells, and other chains bound his fat arms and legs.

Upon his head rested a strange cap or helmet, a curved and spiralled thing that gave off faint flashes of rainbow-tinted brilliance. Ages before, it had been the shell of a nautilus-like sea creature and had become a fossil, turning to stone. Found by some ocean-

side loiterer, it had been prized, and in some way—a tedious succession of tradings, journeyings, thefts, war-plunderings—it had come the far distance from the sea, through the hands of a dozen peoples, into possession of the Flint Folk. Unique, glorious and full of mystery, it was the sacred head-dress of the priest. Some of the inner spirals and partitions had been cut away, so that the thing fitted Ipsar's head snugly.

"Liar!" screamed the red-bearded man at Naku. "You speak sacrilege. If the Thunderer hurled fire at you—"

"I say that fire has been hurled. Look."

The young man pointed to where, in the forest far along the lake's margin, rose brilliant banners of flame and clouds of smoke. "But it missed me. The Thunderer, I say again, is no god. If he is, let him strike me!"

EVERYONE waited. Naku shook his fist into the sky.

"I defy the Thunderer, I challenge him to fight me. See, nothing happens! If it hears, it is afraid!"

He gazed at the press of men around him, and farther at the timid, shifting fringe of women and children. He felt that his people half believed. Then another figure sprang to the log at his side. It was Rrau, as lean and gray and fierce as a wolf. The chief glared, and his beard bristled.

"Naku speaks the truth!" he trumpeted like a mad mammoth. "I have never believed in the Thunderer, but when others of you turned after Ipsar's preachings I kept still. I am a man of war, not of words, and I thought to let the matter be proven before I took one side or the other. I say now, that it is proven!" He turned to Naku. "This man I know of old, and his father before him. He does not lie. What he says has happened. If he defies the Thunderer, so do I!"

At such an uncompromising statement from so important a figure in the community, a ragged cheer went up. Even those who had worshipped the Thunderer at Ipsar's cunning behest, did so through fear—fear has always won more respect and service than beneficence. The old cult of the Shining One had been less exciting, but more kindly. If the fierce new diety could be overthrown, the Flint Folk would be thankfully pleased. One or two of the fiercest set up a shout.

"War! War!"

"Fools!" snarled Ipsar, but his voice was drowned in the swelling outcry. Rrau sprang down to earth and spoke to a brawny fellow near him.

"Seize that priest and hold him prisoner. His words, not Naku's, are lies. We will go and see this Thunderer. If he seeks to do us harm—well, our arrows of flint are sure, our axes and spears of stone are sharp."

But Ipsar went skipping and hirpling away, swift for all his infirmity. He looked funny, and the simple Flint Folk laughed. That laughter spelt the sudden end of his influence, of his soft living, and of the power of fear he wielded. Almost at once he was forgotten. Even the man to whom Rrau had

spoken turned from pursuit, anxious to be one of the adventurers who would march against the Thunderer.

Rrau counted the fighting men present. There were a good sixty, more than two-thirds of the able-bodied men of his tribe. He weighed the number against what Naku had told him of the Thunderer's fortress.

"These are enough," he pronounced. "There must be more of us than of those Thunder Folk, and Naku says that they are weak and thin to the seeming. Also, we will sneak upon them without their knowledge. When the others return from hunting, let them stay here and keep watch." He lifted his voice to bellow orders: "All warriors, go to your huts, take your best weapons! Follow me! Naku, lead the way!"

More cheering and enthusiastic hubbub. The party formed quickly, a column of twos, with Rrau and Naku walking together at the head. The women exhorted their males shrilly, and the men laughed back that they would return with the wing-feathers of the deposed god with which to sweep the hearths of their huts. At Rrau's gesture, the column moved out.

THE noise and laughter died out quickly, but not the determination. Naku led his companions in a wide curve to avoid the section of forest that still smouldered, and Rrau kept watchful scouts far to right and left of the main body. At length the expedition came to the trees at the brink of the cuplike valley. Rrau and Naku, moving cautiously forward, peered out and down.

"The fortress looks larger than you described it," said Rrau at once.

"It has grown since I was here," replied Naku, wondering how, in less than half a day, the strange Thunder Folk had made great curving redoubts that swelled their lair to almost twice its original size. He and Rrau studied the light reflections and rising threads of smoke that showed inside, speculating vainly on what they might be. They had no conception of furnaces, refineries or forges.

There was a busy sound in the air, a blend of clanking metal, churning wheels, dragging of weights. The Thunder Folk—those invaders from a far world—were tightening their grip upon the empire they hoped to conquer.

"Look!" said Naku suddenly.

From another part of the forest's edge, beyond the section which had burned, darted a human figure. It was heavy-set, and ran unsteadily down the slope toward the walled spaces in the bottom. The sunlight glowed upon a flying red beard. Ipsar, the priest, was hurrying toward the lair of his god, the Thunderer.

Naku fitted arrow to bow, but the priest was too far away and moving too fast for a sure shot.

"He goes to warn the monster," he muttered to Rrau. "He is afraid for it. He knows that it is not all-powerful."

"That is well," responded the chief. "We shall destroy him along with his Thunderer."

At that moment, the circular door in the

rampart opened. Something poked itself out—a gleaming something, at which all the hidden Flint Folk stared. It drew itself into view, a jointed object that moved and postured, and seemed to have a form grotesquely human.

"Is that one of the Thunder Folk?" the chief asked Naku.

"No, it is something new. It looks stronger, and it has no face—only that round light at the front of its head."

The robot moved to meet Ipsar. A second robot emerged. Behind them lurked one of the stick-limbed Martians, a baton-like ray thrower in his red hands.

Ipsar sensed danger, and howled for mercy, throwing up his fat arms. The robots moved to either side of him, towering high above his head. They clutched his shoulders with the lobster-claw appendages that served them for hands. Ipsar winced, but when they drew him toward the door he went willingly enough.

"Let us begin the fight," said Rrau, and Naku, stepping into the open, drew and aimed his arrow.

He intended it for Ipsar, who patently meant to betray his people to the enemy, but just then one of the metal giants interposed its cylindrical body, and against it Naku sped his shaft. True to the mark sang his shaft, and bounced away. Loud rang the impact, the same sort of vibrating noise that Naku had evoked when first he shot at the flying machine he called the Thunderer.

BUT the robot was not hurt. It only turned itself in the direction from which the arrow had come, seeming to glare upward at the forest-edge with its foggy light that was like a single eye in its blank, hard head. The other dragged Ipsar into the stronghold.

"Shoot, all of you!" growled Rrau at the other men.

They, too, sprang into the open, a skirmish line of ready warriors. At almost the same breath of time, their arrows were launched, a sudden storm of flint, converging on that dull-shining figure that stopped to face them.

The air rang with the multiple impact, but the arrows glanced away like hail from the side of a cliff. The thing did not even reel. Instead, it took a slow step toward them.

Another robot came forth from the fortress, and another and another. They ranged themselves besides the first. Then more appeared, a dozen, twenty. Some carried the metal rods that threw flaming rays. Others had long blades, with keen edges. One or two bore sheafs of shackles.

Again a volley of arrows, straight to the targets, but absolutely ineffectual.

"They have shields of some kind—or magic," muttered Rrau. Again he raised his voice: "Do not fear, men of the Flint! Take axes and spears—they are fewer than we—charge at them!"

He himself sprang forward and led the rush, his mighty axe whirling overhead—a keen, heavy blade of stone set in a tough shaft of dark wood. Rrau could strike heavily and accurately enough to split the skull of a bison, and if these shining things

were men—even men with some sort of armor, like a tortoise or crocodile—he would show them who was master. Inspired by his example, the other Flint Folk whooped and charged.

The robots did not move, either to retreat or to resist. They only stood in a row, each poising a weapon. It was not until Rrau, twenty paces in advance of his charging tribesmen, was almost upon them that a robot stepped forth, lifting the ray-rod in its clawlike hands.

"Hai-yah!"

Rrau thundered his warcry, sprang high into the air, and for the moment was on a level with his tall opponent. With both sinewy arms he swung his axe, in a great whistling arc, full upon the top of the metal lump that did duty for the robot's head.

Thunk! It drove home, a blow that would have severed a tree-trunk or smashed a granite boulder—but the robot barely buckled. The flint edge crumbled, the metal head wagged, and only a slight dent showed.

Then came the response. The machine-man levelled the weapon it held. Forth gushed a streak of white fire. Rrau, chief and champion of his people, at whose name enemies trembled and sought to hide, was suddenly nothing—nothing but a puff of smoke, a settling scatter of ashes. He had been rayed out of existence.

As if by signal, the other robots came into the fight. With a knowing sweep of their rays, they blasted and burned the oncoming horde of fighting men. Warriors were blasted to smoky atoms, before they could cry out with pain. The survivors paused, wavering. And then the robots moved upon them with deliberate intent, swinging their blades and plying their rays.

The Flint Folk knew fear, a fear of which no mortal need be ashamed. They turned and ran, all save one—Naku, who had run abreast of Rrau but at a distance, and was now cut off by the counter-charge of the robots. The machine-men had fixed their attention on the main body and seemed to ignore this isolated figure, but he could not reach the shelter of the trees.

Turning, he fled along the curve of the great wall. One robot was aware of the sudden movement. It detached itself from the detail and clanked in swift pursuit.

WITHIN the Martian ramparts, the commander was grimly jubilant.

"See, they run!" he cried, gazing into the vision-screen that had been set up in his hut-like shelter at the center of the enclosure, just beside the parked space-ship. "They cannot hurt our robots, and cannot stand against our weapons. We have completely wiped out those who were too slow or too stupid to flee. The extermination of the survivors will be easy."

"Could they not be spared?" offered Vwil, and his superior made a gesture of disgust.

"Sentiment again—it has no place in science or conquest. Yet the study of captives of this race might be interesting. The single specimen who came to us of his own accord is, I think, unusual. For one thing, his brain refuses to receive the command—

impulses of my own mind, as have those of the other animals we have snared."

He jerked his high-skulled head toward a quarter of the settlement where, in a row of pens, were imprisoned some antelopes, two bison, and three disconsolate mammoths, as well as other beasts.

"If he was controllable, he might become a useful slave, a supplement to these expensive and limited robots."

The two gazed to where sat the pudgy form of Ipsar, the renegade priest. He was shackled and disconsolate, his red beard out of its plaits, and a robot stood near to guard him. On his head still rested the fossil nautilus-shell that did duty for ceremonial helmet. None of the Martians had seen fit to remove it.

"His face looks evil," observed Vwil. "The fact that he came submissively to us, while the others fought, shows that he is a traitor to his own kind. Therefore—"

"Therefore," the commander finished for him, "he may help us with our conquest. But your arguments have given me a new idea, Vwil. Not long before the battle, I sent a flying detail to capture some more of these bipeds. We may not kill off the race. Not all of it, anyway."

CHAPTER IV

Captured

NAKU, the fleet of foot, sped around a curve of the wall, out of sight of both his routed companions and the robots. There he paused, panted and listened.

Clunk, clunk, clunk, came a rhythmic, muffled ring. Two feet—feet of that strange gleaming stuff that vibrated when struck. One of the strange monsters was pursuing him.

For a moment Naku felt a grip of unreasoning panic, then his wits came to his rescue. One monster pursued him, only one. Perhaps the others knew nothing of him. If he broke into the open, he would be sighted and overhauled. But just now the odds were even, and perhaps, with luck—

He pressed his body close against the wall, and in his right hand poised a spear with a flint tip.

The robot came into view along his back trail, and it held in one claw a curved blade, in the other a pair of shackles joined by a linked chain. Death or capture for Naku! And its round glowing face-lamp turned upon him. Abruptly it bore down.

Naku threw his spear, instantly and with deadly accuracy, full at that disc of light. It was a direct hit, with all of the rugged strength of his muscles behind it. And, as he had been inspired to guess, that disc was the one vulnerable spot.

The pane of clouded glass, that to Naku looked like ice, splintered away. The flint head of the spear crashed into the lighting mechanism behind, obliterated it and lodged among the ruins. The robot stopped its advance, staggered, and dropped the shackle. Clumsily it clawed away the shaft, then stood, baffled and disconsolate, its arms outflung as though to grope. It acted like a

man suddenly gone blind.

"Ho, you are wounded!" Naku taunted it. "I struck you—I, Naku, the enemy of your father, the Thunderer."

But it could still hear, or at least it had some sense that approximated hearing. At the sound of his bantering voice, it groped quickly toward him. If those great toothed pincers should close upon his body, he would be lost. He had no weapon left save the flaked poniard at his girdle, and he did not want to come close enough to use that. Therefore he retreated before it, and it heard the soft shuffle of his sandals. It tried again to close in. Naku, still fearful of being caught in the open, stayed close to the wall, falling back and watching his blinded pursuer.

He saw that its limb-joints and the juncture of its neck at the top of the body cylinder gleamed with an oily blackness. Naku did not understand mechanical lubrication, but he knew about the use of bear-fat, dried out and used to dress wounds or sunburn. Once or twice, in wrestling games, certain of his fellows had craftily greased themselves to foil a grip. Naku, still breaking ground before the uncanny metal thing's blundering pursuit, began to put two and two together.

The black oil at the joints was to make for easy, slippery motion. If it were clogged, the thing might be overcome. He remembered a counter-stratagem he had once played on an unethically oiled wrestler. Stooping quickly, he clutched both big hands full of gritty earth. Then he straightened up and stood his ground.

"Hail!" he addressed his adversary. "Come close now, if you dare!"

IT CHARGED at the sound of his voice. It towered above him by the height of his own head, and seemed of tremendous weight. Naku pluckily met its rush, however, and with desperate precision hurled his two handfuls of grit, one upon each shoulder joint. Then he sprang aside.

The effect was all that he could wish. The monster blundered past him, but the lubrication of the metal shoulders was clogged at once, and the arms could barely move. They made harsh rattling sounds, and seemed to lose control of themselves. Standing still, the robot cocked his grotesque blind head, as though to listen for his movement.

"Here I am!" shouted Naku beside it, and again sprang aside. As it turned and stepped in the direction of his voice, he placed both his hands against its flank and gave a mighty push. It stumbled, crashed hard against the wall, lost balance and fell. The blade it held went spinning away.

At once Naku sprang in, scooping and hurling earth with the savage swiftness of a fire-fighter. He heaped grit upon the joints of hips, knees, elbows, neck. The metal body ceased its struggles, whirled and grated inside, slackened off. Naku felt a high thrill of victory. He stepped close to examine his fallen foe. Was it dead, or only shamming?

At that moment, a whirr sounded from the heavens, and something dropped down—the flying thing, the Thunderer. Naku dropped

his own body, like one stricken, and shielded himself behind the bulk of the robot, peeping warily over its torso with one eye.

The machine settled itself, before the section where the door would be, but far enough out to be within the line of his vision, and out came two of the scrawny men, with a robot. The robot held the end of a chain to which, like a dog on a tether, was fastened a fourth figure.

A human being, like Naku himself—no, not like him. It was a young woman, a girl.

Naku lifted his head by the breadth of a finger, to see more clearly. She was a prisoner, it was plain to see, for her wrists were securely shackled. He could not tell from what tribe she came, but guessed that it lay well to the north. She had the blonde hair of the northerners, lots of it in disordered clouds about her face. A handsome thing she was, too—slender in her brief tunic and kirtle of deerskin, straight and proud and shapely.

Her captors led her out of sight.

Naku pondered this new thing he had observed. Apparently the Thunder Folk did not mean to kill indiscriminately, after all. The girl, though securely bound and guarded, did not appear harmed in the least. And the heavy, shiny hulk he had conquered with his hurled heaps of dirt had carried not only a weapon but a shackle with which to bind him. Naku smiled to himself yet again, in self-applause at his new triumph.

"Three I have overcome," he thought. "One died of an arrow in the very heart of the Thunderer—a second before the opening to their lair—and now this one, a strange giant and the biggest of the three. There will be a fourth victim, and a fifth. I will conquer them all. I, Lone Hunt, am stronger and greater than these Thunder People!"

It was a proud thought and, even in those far-off young days, pride often went before a fall.

IN THE midst of his musings, Naku was aware that he was being approached stealthily from behind. He sprang up and spun around his hand to his dagger-hilt.

Two creatures had evidently issued from another door, farther along the wall, and now stole upon him—a big gleaming robot, and a gaunt, heavy-trudging Martian with a dark red face. The Martian, in advance of his metal servitor, levelled a small shining rod that had a round opening in the end pointing toward Naku.

The simple warrior had seen the rays in action all too closely, and he knew what such a device might be. He could neither fight nor fly. All that was left to him was to die bravely, he felt, and that he determined to do.

"Throw your fire at me, coward," he challenged. "I have killed more than one of your brothers. I am not afraid to die. I laugh at you."

And he did so, merrily. The skull-lean, snipe-nosed face of the Martian smiled in answer, neither fiercely nor mockingly. The tube, pointing at Naku, gestured at him as though to bid him turn and walk.

Naku shook his head.

"Not I," he demurred. "If you want to burn me, do it now—not sneakingly from behind." And he planted his feet, glaring at what he felt certain was his destruction.

The creature sighed as though in regret, and touched a little projection on the rod. Fire gushed forth—not white, but pale blue. It enveloped Naku like a splash of water. He felt no pain, only languor. His senses were slipping. His knees sagged, his eyes closed, and he felt himself gently collapse.

THE Martian commander came from his headquarters just as Vwil entered the fortress. Behind Vwil clumped a robot, carrying in its arms a limp human form.

"Did you venture out?" said the commander.

"Yes. I was at the power-caster, and the gauges showed that one receiving set had ceased to take energy. I guessed that it must be a damaged robot, and reconnoitered. I found that this native had overcome and wrecked one of the robots. I disabled him with the sleep-ray—"

"Why did you not kill him, since he had harmed us?" broke in the other. "Oh, but I forgot that laughable softness of your spirit. Well, perhaps you did rightly. If he was adroit enough to defeat a robot, he may have a nervous system complex and sensitive—worth my experimentation. Have him put in the new pen with those others of his kind."

CHAPTER V

Conference with the Invaders

WHEN Naku awoke, he felt sunshine in his face, earth against his sprawling back, and a pillow, soft but firm, under his head. He opened his eyes, and looked into a most admirable face.

It was a woman's face—young, oval, firm-jawed, straight-nosed, blue-eyed. It was flanked by two braids of sun-colored hair that caught gleaming lights. A low voice questioned him anxiously.

"Are you badly hurt?"

Naku sat up, flexed his arms and stirred his legs.

"No," he decided. "I remember being struck down by blue fire. What has happened?" He turned to face the girl on whose lap he had been pillowed. "Who are you?"

"My name is Arla. We are prisoners of these—I do not know what they are called, but they are very evil."

Ordinarily Naku, reserved from boyhood, would be wary and shy before a stranger girl, but this one had done her best to help him. He studied her closely, and remembered seeing her before—this was the captive who had been brought in the Thunderer, the flying thing. He smiled at her thankfully, and looked around.

They were in a cage, with a flat roof of hard-packed earth, such as the Martians know how to fashion with their control-devices, and walled with perpendicular bars of metal. Part of these bars made up a door, fastened with a complicated lock. Against the door, at the far end of the enclosure, sat



The resourceful Naku flung his handful of grit

Ipsar, still dressed in his garish garments of priesthood, but very rumpled and disconsolate. He met Naku's eyes, and growled:

"Be careful of that woman. She is a wasp."

"He says that because he felt my sting," Arla informed Naku. "I do not seek the caresses of fat strangers."

Naku, studying the priest, saw that one of his eyes was badly bruised, as from the impact of hard little knuckles, and grinned. Then his face went serious again.

"We three must be friends and help each other," he pronounced. "These Thunder Folk have killed many men of my people, and hold us captive. How can we get away from them?"

"We cannot get away," said Ipsar sourly. "The power of the Thunderer is too great. He flies, he strikes fire—"

Arla shrugged her pretty shoulders in contempt.

"I know about this thing he calls the Thunderer," she said. "It is no living bird, but a thing made and operated by men—or, rather, by these manlike devils you call the Thunder Folk. The thing is hollow inside, with doors, like a hut; but it is a hut that can fly."

"Can it be?" cried Naku, trying to comprehend.

"I have been inside, and have seen. One of the Thunder Folk sits among strange

sticks and round whirling things, and by handling them makes it go fast or slow, up or down. It swooped upon me as I fetched water just outside our village to the north. I was made stupid by fear, and those inside seized me. I rode in the thing with them, and used my eyes."

NAKU digested this.

"How can a thing not alive be made to fly or move otherwise?" he demanded.

"Can not a man make an arrow fly in the direction he chooses, by the power of his bow and the aim of his eye?" returned Arla. "Can a noose of rope not draw tight, as though it were a hand? This flying thing operates in the same way, but more wonderfully."

The idea sank in, and Naku had a contribution of his own.

"The big, strong things that walk and fight, and seem to be men," he said, "the ones made of shiny hard stuff, and bear round foggy lights in their faces—they, too, must be strange fashionings. They are—tools!"

"Even if so," argued Ipsar, "they are too deep a matter for us to understand. We must submit to the power of the Thunderer."

"The Thunderer, I say, is only a tool, a utensil that flies at the will of its owner," snapped Arla.

"I think that she speaks truth," seconded

Naku. "If it is a deep matter to handle or to operate it, maybe I still can learn, as a child learns to shoot with the bow or to make a noose."

The argument was interrupted by a clatter at the door behind Ipsar. Startled, the priest slid sideways, and the section of bars swung back. There stood a Martian, supporting himself on a stick against Earth's sore pull of gravity. He beckoned to Naku with a hand that, though claw-thin, was plainly human, of flesh and bone.

"He wants you," spoke Ipsar. "Obey him—go."

Naku shook his head, and felt for his dagger. It had been taken from him.

"I will not obey," he said sturdily. To the Martian he snarled: "Come in and try to take me. I will break your scrawny back across my knee."

The Martian only smiled—Naku saw that this was the one who had overwhelmed him with the blue ray. Then the Martian turned and fixed his brilliant green eyes upon an attendant robot. He did not speak nor make a gesture, but the metal monster understood. It entered the cage with heavy steps, seized Naku and carried him out, struggling and kicking like a naughty child.

As it bore him away, his angry eyes had a glimpse of the interior of the fortified place, and it was as if he were in another world. The ground underfoot was paved in geometric design. Strange shelters of tile and metal stood here and there with, in the center of them, the great gray-gleaming fish that was the space ship.

Here and there stood or sat Martians, but none of them moved more than necessary against the drag of Earth. Most of the work—smelting, digging, building, with a variety of incomprehensible machines—was in charge of robots. All the horizon that might be familiar to Naku, the green slopes of the valley and the forest above and beyond, was shut away by the high red ramparts.

Naku's captor carried him straight to the space ship, and in. At once Naku felt a strange lightness, as though he could float. The gravity screen of the vessel was set to the pull of Mars. Inside a cubical compartment, the robot thrust him into a chair, strapped his wrists to the arms and his ankles to the forelegs. Then it stumped out. The Martian who smiled seated himself opposite Naku, before a flat-topped piece of furniture studded with push-buttons, levers and gauges.

THE Martian pressed a lever. Another of those strange light-rays, with which the invaders seemed to do so much of their working and fighting, gushed out—a soft cloud of orange radiance. It smote Naku full in the face, but did not blind or irk him. He felt all fuzzy inside his skull for an instant, then more awake than ever before. The Martian's smile grew broader, more understanding. For the first time, his lips moved and he spoke.

And Naku could understand him.

"Do not be afraid," he was saying, "and do not be mistrustful. This ray frequently

makes our thoughts communicable one to the other. My name is Vwil, and I come from another world, another star."

"Then go back to that other star," said Naku at once. "We do not want you here."

A rueful smile from Vwil, as though he would like Lone Hunt to be friendly.

"Our world is poor, starving," Vwil argued. "We have flown here in hopes of finding a place that will support life for ourselves, our comrades, and our children to come. Your world is larger than ours. It is rich, with much vegetation and water and air. There is room here for both your people and mine."

"I cannot live as a neighbor of the Thunderer," snapped Naku. "I have killed some of your people—two of the thin, red-faced ones like you, and one of the big shiny ones with a round light for a face."

He stared at Vwil, and his young eyes were as hard and sharp as war-axes.

"If I was free this moment, I would kill you."

"It is you who want to fight, not I," Vwil replied with a sigh. "What is your name?" Naku told him, and Vwil continued: "You started the fight, Naku. Yet, I think we can be friends. This ray of light makes it possible for us to talk. Can we not touch hands and be helpful to each other?"

Naku wagged his head in fierce negation. "I used to know this valley," he said. "It was peaceful, silent, green. Deer ate grass, and birds flew over it. Now you have built this fort and killed the grass. You swallow the very ground. Only the Thunderer spreads its wings—and the Thunderer is not alive, but a tool, a flying house," he added, remembering what the girl Arla had told him. "You have fought my people once, and beaten them. But there are others, Vwil the Invader. Many others, more than you can count—tribes and nations of fighting warriors!"

His chest swelled, as for the first time in his life he considered all mankind as a single battling unit.

"You may beat others, but those who live will learn your secrets to use against you. Even I, a young man and a prisoner, have learned much in a little time. And in the end—"

"Wait!" came a new, cold voice.

Vwil rose from where he sat, and his attitude was respectful. A second Martian came and took the seat Vwil had quitted. His face was hard and full of ruthless wisdom.

"I have heard your soft words, Vwil," said the newcomer. "I disapprove. As commander, I will finish this interview. You may go."

VWIL departed from the chamber, but once he looked back. His brilliant eyes caught Naku's, who saw that they were full of pleading. Then the Martian commander addressed the captive:

"Let me tell you the truth of your situation and that of your people. You have boasted to that weakling, Vwil, of your triumph—two of us, and one of our robots have fallen before you. Let me bolster your conceit further, and inform you that these

are all our losses—inflicted by your hand alone. The rest of your race has not done us one bit of harm. And you, being a prisoner here—”

“I will escape,” Naku promised him.

The commander smiled, not like Vwil, but as fiercely as a hungry wolf. His skull-face was a mass of crinkles, as hard and set as dried leather.

“I think not. Our first specimen of your race, the fat one with red hair on his chin, disappointed my experiments. He could neither be made to understand our speech, nor to receive the impulses of my will. You, under this ray, are more receptive.”

So they had tried their tricks on Ipsar, and without success! Naku wondered about it. Was he not stronger of will, quicker of mind, than the pudgy priest? What shield, then, had Ipsar against the science of these invaders? If he, Naku, could get such a shield—

“Naku,” the Martian chief was saying, his eyes fixing the young man’s, “do you hear my words?”

“Of course I hear them,” replied Naku.

“Do you obey me?”

“Obey you?” repeated Naku wrathfully, and met the blazing eyes opposite. He was ready to fight against his bonds, to burst them and leap at the contemptuous thing who presumed to set himself up as master . . . but a new thought came. He was a captive. These were wiser, stronger beings. They must know best. Naku felt no surprise that his attitude changed so suddenly, under the green gaze of the spider-man with the lean red face.

“I obey you,” said Naku humbly.

“You know,” continued the inexorable voice, “that we, being desperate for life, are justified in coming from our poor world to your rich one—that it is our place to rule and yours to serve.”

Of course that was the truth, Naku realized. Just as man could conquer and exploit the animals, so could these Thunder Polk, being wiser and stronger, conquer and exploit man. It was a law of nature, said Naku to himself—he should be grateful that he was allowed to live. So completely had Naku’s attitude changed under the suggestive power of the Martian.

“It is your place to rule,” Naku repeated, “and mine to serve.”

“Good.” The commander rose, came to him, and unfastened his bonds with a deft flip of the buckles. Naku rose respectfully.

“I have hopes of your kind,” announced the commander. “Be good servants, recognize your subordinate position, and you shall live—prosper, even—under our rule. Now, return to your cage.”

Submissively, Naku did so.

“AND so,” the Martian commander finished his report to Vwil, “I succeeded. The exertion of my will-power, while the ray was turned on, conquered the creature’s primitive individuality on the instant. Henceforth he will understand and obey us. When one of us meets his eye and speaks his will, the creature will carry out the order. These natives who call themselves ‘men’

are slaves ready to our hand—physically strong and adroit, cheaper than robots, intelligent enough to receive thought-impulses and obey, but not to overthrow.”

“That is interesting,” said Vwil. “I am sorry that I cannot report so encouragingly on my own labor.”

“Your own labor?” repeated his chief. “What have you been doing?”

Vwil held out a chart, on which he had noted various chemical figures.

“It is the question of fuel. We have not enough to return to Mars.”

“We can manufacture more when the time is ripe,” snapped the commander. He was irritated once more with Vwil. This enigmatically gentle scientist, so brilliant and yet so weak from the Martian standpoint, was always a challenge. Just now the commander had recited his triumph over Lone Hunt, not as a leader informing a subordinate, but as a subordinate seeking the commendation of a leader. And Vwil, unimpressed, had only admitted his own failure in another field.

“This planet, however rich, lacks certain necessary elements,” Vwil was saying. “Also, the explosive power of metals seems subdued. I fear that we cannot manufacture proper fuel—we are stranded.”

“Let it be so,” growled the commander. Suddenly he felt more ruthless and determined than ever. “We shall make ourselves lords of this world. The men whom we capture shall serve us in a closer capacity than as slaves or robots.” His eyes glittered a brighter green. “Listen, Vwil, to what I plan.”

“Yes?”

“Our brains are great, but our bodies weak. These natives, less developed of mind than we, have yet strong bodies, well adapted to the particular life-struggle here. The inference is obvious.”

“Perhaps,” said Vwil. “Yet I do not approve—”

“Once more, I remind you that I command. We shall transplant our brains to their bodies. We will become immortal, even—as a body grows old, we can shift the Martian brain in it to a new, young body. Always we shall take the finest physiques for ourselves, and the rest of the human race shall serve as slaves. When more of our people come—”

“Will more come?”

“We cannot return, as you have shown,” said the commander. “Unless we do return, reporting this planet as unfit for habitation, others will follow to see what has become of us. We, the pioneers, will be also the chiefs and heroes of the new colony of Mars.”

His voice rose exultantly, his lean face was suffused with a darker red. It was as though he saw the enslavement and exploitation of all humanity achieved, the complete control of Mother Earth in the bony hands of his own invading race.

“Let the flying detail go and seek for more good specimens,” he rasped. “Let them bring only the finest, killing all others. Meanwhile, we must experiment. Who is our dullest brain, the one with whom we can experiment most cheaply? Bring him to the

surgery, also that fat fool among the prisoners, and make ready for an operation."

CHAPTER VI

The Shell Cap

A DAY and a night had passed since Naku had been returned to the cage from his interview with Vwil and the Martian leader. Away from the influence of the Martian, he could once again think for himself. With the dawn, the flying machine—Naku no longer thought of it as the living Thunderer, but as what Arla had pronounced it, a complicated tool—came winging back from another expedition. It had swooped at night upon a camped hunting party, killed two men and captured a third. As robots led this hunter to the prison, Arla sprang up from where she lay asleep on soft sand.

"Lumbo!" she cried, in a voice that betrayed both happy surprise and concerned question. The young man in the grip of the robots was a blond-haired, blue-eyed specimen like herself, and his face—it was as handsome as her own, but with masculine strength of contour—lighted up in recognition. He was thrust in, and Arla seized him in welcoming embrace.

"They have not hurt you?" she demanded in tender concern.

Naku watched, with feelings he did not bother to diagnose, since they were strangely glum. He had known Arla only a few hours, and up to now had not had the time to consider whether she was desirable or not, until this stranger suddenly claimed her affectionate attention. He must be her husband or lover—and Naku suddenly disliked the idea.

He turned over in his mind thought of a sudden plan to provoke a quarrel with the blond youth. It would lead to a fight, with Arla as prize of victory. Naku gauged the other's volume of muscle, his quickness of reaction. Probably here was a good fighter and ready, but Naku felt himself to be both stronger and fiercer . . .

The robots who had brought the man called Lumbo had also roused fat Ipsar from slumber and dragged him out. Ipsar struggled and protested, and the seashell cap fell from his tossing head and lay just inside the barred door as it slammed behind him. Arla turned toward Naku, her blue eyes filled with flecks of golden joy-light.

"Naku," she said, "this is my brother, Lumbo—the son of my father and mother. He was surprised and captured by these Thunder Folk, but now he is here, with you and me. The three of us are wise and strong. We will find a way to escape."

Her brother! Naku's dark, square-jawed face glowed with a joy to match Arla's own. His welcoming hand caught Lumbo's and squeezed it until the other winced.

"I am glad to see you," said Naku honestly. "Glad that you are Arla's brother."

Arla bowed her head shyly—she, at least, understood the inference. Lumbo rejoined courteously, and added: "Arla is right. We three should win out of this trap. Tell me

what you know of our captors."

The trio of young people sat on the sand, Lumbo in the center. Arla and Naku alternated in setting forth both observation and theory. At the end, Lumbo summed up:

"We are unarmed, and caught like fish in a net. But," he added weightily, "from what I have seen and from what you tell me, I have it in mind that we are also like netted fish in that those who caught us must work clumsily with us, like fishermen wading and swimming in water. I mean that these stranger people, whom Naku calls the Thunder Folk, do not feel natural upon our world. Light weights are heavy to them, and the air is thick to their breathing. We, who are used to these things, have the advantage by at least that much."

HE PAUSED to let the idea sink in, and picked up the shell cap that Ipsar had dropped.

"What is this thing?" he asked. "Does it belong to the Thunder Folk?"

"It was the cap worn by Ipsar," Naku replied. "He wore it to show that he was a priest." Taking it from Lumbo's hands, Naku set it upon his own shaggy black hair to demonstrate. The thing fitted snugly, and weighed little. The three prisoners continued their talk, and Naku forgot that he wore the shell.

Meal time came, and it was Vwil who brought food in his own spidery hands—metal bowls, in which were contained sliced roast meats and several kinds of fruit. He spoke in friendly fashion to Naku, but his purring words were unintelligible. Naku shook his shell-capped head, and both he and Vwil stared uncomprehendingly. They had understood each other well the day before, in the space-ship. What was wrong now?

Naku, perplexed, lifted a hand to rumple his hair. That hand twitched back the shell cap, and at once he knew what Vwil was saying in the language of the Martians:

"Answer me, Naku. I am still ready to be your friend, to help you if I can. Do not pretend to be deaf."

"I am not deaf," grumbled Naku, and Vwil also understood. "It seems that—"

He was about to say that the knowledge of Vwil's language had seemed to escape him for a moment, but on impulse he broke off. Dropping his hand from his head, he let the shell settle back into place. At once he was unable to comprehend Vwil's words, but the Martian's manner suggested a friendly farewell. Left alone, the three began to eat, and Naku and something amazing to relate.

"I could understand him, and he could understand me, only when I pushed back this shell cap," Naku informed the others. "When I have it on my head, he speaks strange words."

"We did not understand him at any time," contributed the girl Arla, sinking her white teeth into a big yellow plum.

That was an additional item to consider, pondered Naku. He remembered the orange ray, and how Vwil apparently used it to establish communication with him. Arla and Lumbo, who had never felt that ray, could

not understand. The consideration extended itself; they would never understand the Martians until the ray was played upon them.

Naku remembered something else. The Martian commander had spoken of Ipsar, had said: "He could neither be made to understand our speech, nor to receive the impulses of our will." Naku took the shell from his head and gazed at it. Yes, Ipsar had worn that shell until his recent struggle with the robots. Naku, wearing it, had shut away the understanding of Vwil's words, as a wall might shut away light—even the light of the orange ray. What did it portend?

FORGETTING to eat, Naku groped for a decision. Again he studied the shell. It was of unthinkable age, enamelled with the stony lime of petrification, and it hid his thoughts from the Martians. Naku, like all his people, believed that the heart, not the brain, was the seat of the reason and the emotions, and so the idea of an insulated brain-case was not easy to grasp. But the facts were before him, and he decided to accept them.

He considered, too, that the ray-induced ability to understand the Martians also bent one's will to those strange and forbidding creatures. The commander had said so, and had demonstrated it. But he, Naku, had the shell-cap. Without it, he could understand the Martians, benefit by what they said. Wearing it, he could withstand their wills. Naku began to think that here was a chance for escape—even victory.

Lumbo was haranguing his sisters on that very subject.

"Without beating these Thunder Folk, destroying them, it makes no difference how far we run from them. What they say and do shows that they intend to rule the world, and us. We must fight—win."

So they all talked. Naku kept the shell cap on his head lest a Martian, passing, overhear and understand him and report that the captives plotted. He also stared through the bars at the garrison, their buildings and equipment, and at the walls that seemed ever to grow and embrace more territory. Soon these walls would enclose the whole valley, encroach on the forest. Would the fortress eventually overflow all the world?

In the midst of this, figures approached. All three looked up. Two robots came, and the Martian commander, and Ipsar the priest.

But Ipsar no longer went in a prisoning grip—he walked beside the commander, who leaned for support on the fat shoulder. Ipsar's cranium was swathed in white bandages, and seemed to have swelled beneath them. He spoke, and the voice was Ipsar's, but the words—they were in the language of the Martians!

Wondering, only half guessing, Naku whipped off the insulating cap. At once he made out the words, and they were addressed to himself:

"You with the black hair, prepare to go with this party." With his own plump hand, Ipsar unfastened the barred doorway. "Come forward, I tell you."

"Come out," seconded the commander, catching Naku's eyes, and Naku obediently

emerged. "What do you hold in your hand, that stony thing like a bowl?"

Ipsar closed the gates upon the staring Arla and Lumbo, and came close to Naku. "Yes," he said curiously, "what is that?"

His query saved Naku, saved mankind, saved the world. For the young man held by the will of the commander, would have replied truthfully and fully concerning the cap's power to shut off thought-impulses. But Ipsar's evident ignorance of the object he had worn so long and constantly made Naku turn toward him.

"Do you know what it is? You, as priest, had it always on your head."

"Did I?" And Ipsar took the cap, lifting it to his bandaged pate. But the swathings and the enlargement made it impossible to fit the shell in place.

"I will wear it no more," he announced. "Here, prisoner, it is yours."

Contemptuously he slapped it upon Naku's head, and at once the next speech of the commander slid into unintelligible purrings and snortings. Naku could not understand them—and could not feel the impulse to obey in his heart.

When he did not act upon whatever order was given him, the commander fiercely repeated it, and pointed toward the center of the fortress, where the space-ship still lodged. Ipsar, on the other side of Naku, was also speaking in the Martian tongue, but, like the commander, was only astonished and not suspicious at all at the captive's lagging. Sure of their psychic control over Naku, neither appealed to the robots.

NAKU made up his mind at once. He took a step toward the ship, and the robots also turned away, leading the party toward it. At once Naku went into action.

A backhanded flip of his big left fist sent the commander spinning head over heels like a straw figure. Whirling without an instant's pause, Naku struck with both hands at Ipsar. His left sank into the priest's flabby belly and, as Ipsar doubled over, Naku's right landed flush on his bearded mouth.

Down went Ipsar, and from behind the bars of the cage both Arla and Lumbo cheered loudly. Naku did not wait to acknowledge the applause. Already the robots turned toward him. One held a ray-throwing rod.

Springing across the floundering form of Ipsar, Naku fled for his life in among the buildings of the Martian settlement.

CHAPTER VII

In the Mammoth Pen

TWO buildings, square storehouses, were set so closely together that Naku had to squeeze between them. But he hesitated only a moment to do it, not caring that bits of skin were scraped from the points of his broad shoulder. Behind the houses was an alley, and into this the two robots were already dashing from either end. Because Naku seemed trapped between them, and also to avoid injuring its companion, the robot with the ray-device did not use it.

But Naku saw a wall or paling, of the red tile-like substance that the controlled atomic machines made out of plain earth. He charged at it and dived over, head first, though it was as tall as he. Landing on hands and knees beyond, he waited a breathless moment. The robots could not follow him, and he heard them clanking away to cut him off beyond. Like a fox he doubled, hurling himself back across the wall and into the alley. Up this he tore, just behind the robot with the ray-rod.

There was an open street at the end of the alley, and across this he made a dash. Shouts greeted his appearance—full half a dozen armed Martians had gathered at the call of their leader, and moved to bring him to bay against a wall. But Naku was an outdoor man, thrice as strong and active as the most vigorous Martian, and the wall had inequalities enough to give him hand and foot holds. He swarmed up like a monkey. A flame-ray struck just where he had been as he mounted, turning the red of the wall to cindery black. Then he was over the coping.

He had hoped to land in open country, but this part of the wall, once the outer rampart, had been passed by the encroaching works of the Martians. Beyond it was a higher wall, and the space between was full of sheds, shelters, and stacks of metal and other materials. It contained, too, a great pen or cage of metal bars with a flat earthen slab for roof—a structure similar to that in which he had been held, but larger and more coarsely made. He could thrust himself between those bars; and, with the noise of pursuit greatingen behind him, that is what he did.

He raced to the cage, squeezed in, without more than glancing at the great brown-black lumps that seemed to pulsate inside. Anything, he told himself, was less terrible and more practicable to deal with than Martians or their robot-slaves—and, even when he saw that the tenants of this enclosure were mammoths, he did not emerge again. For the Martians, four of them, accompanied by armed robots, were coming into view, through ports in the wall. Naku flung himself at full length into a heap of grassy forage which the Martians had sagely given to the captive beasts.

Here he lay still.

There were three mammoths, male, female and calf—great shaggy mountains of flesh, more than twice a tall man's height at the blocky shoulders. Their woolly skulls were high-domed, the index of cunning brains that were mirrored in their tiny, questing eyes. Their legs were like living tree-trunks, covered with hair like thick, coarse moss. And their trunks, as pliable as anacondas and clever as hands, now began to swing and writhe. They squealed and muttered to each other. The sudden appearance of their chief enemy, man, alarmed and infuriated them.

THEY moved, all three as one, toward the heap of grass into which Naku was burrowing. He felt, rather than saw, their great hilly bodies above him. He heard the

rumbling intake of their breath, the rustle of the trunks that began to squirm about him.

The Martians, toward which he dared not lift his face, were patrolling near the cage, shouting to each other and to the robots. A mammoth's trunk groped along the calf of Naku's leg, paused on his bare back, and tweaked his flesh painfully. Naku stoically refused to twitch or gasp. The largest mammoth, changing position, set a massive foot within arm's length of Naku's head, and also explored with its trunk. The top of the member found the shell that covered Naku's cranium, prodded it tentatively, and dislodged it.

At once Naku could comprehend the speech of the Martians. Even in the midst of peril from the mammoths, he listened carefully. The commander was doing all of the talking:

"We may have underestimated these beings that call themselves human. At first the black-haired specimen seemed completely under control, but in some way it wore off. Well, he must have gone over our wall. Go, two of you, on a flying detail. If you catch him, bomb or ray him. He knows too much to be allowed life."

Naku exulted in his hiding. The wise, harsh chief of the enemy was mistaken about him—and afraid of him, eager for his death. Naku swore that in this last case he would disappoint the commander; and then he felt the trunk-tip of the largest mammoth combing his hair. The big beast was snarling to itself, shifting ponderously on its feet, trying to guess what lay so still among the heaped grass, smelling of man but not moving. And the Martians heard.

"Those animals we captured are nervous," one of them said to the commander. "Let us see what they do."

The commander approved, and the party came near. The big mammoth, seeing his captors approach, moved grumpily forward to the bars. A foot swept across Naku's prostrate back, barely a palm's breadth above it, then another. The fugitive, daring to glance up, saw that he now lay under the hair-thicketed belly.

Sensible of his mortal peril, yet he knew that he was for the moment hidden as under a shadowy roof. The Martians were conversing just outside the bars.

"Fix the thing's eyes with yours," the commander was telling one. "See if you can read its mind—impossible, you think? There is something wrong here, but the animal's brain is too primitive to communicate its impressions to ours."

"That is true," agreed the Martian addressed. "Probably these beasts saw the escaped human run near their cage, and climb over the outer wall."

"Probably," said the commander. "If I could but fix that black-haired one's eyes with mine again, I might subdue his will. But time is too short for experimenting. I am weary of walking on this thrice-gravitated planet. Let them bring that other male, the one with the yellow hair, to the operating room."

They moved away. Naku slipped stealthily from under the mammoth's belly, around its

massive hindquarters and into the back of the cage. The big beasts stood together, watching the departure of the Martians. Naku found a space between the rear-hindmost bars and the adjacent partition, a place where he could lie and be safe both from the blundering ill-will of the mammoths and the discovery of the Martians.

HE RECKONED up the evidence in what he had just heard. The commander of the enemy had said something about wishing to look him in the eye. In such a gaze, then, must lie the power to enslave one's will. Naku decided never to look another Martian in the eye, especially when he did not wear the shell cap. Then he looked for the shell cap—it still lay among the cut grass at the front of the mammoth's cage. And, hearing the ill-tempered squeals and snorts from the three giants, Naku dared not go back just now for it.

He continued his diagnosis of the Martians' conversation. Lacking Naku, the commander ordered that "the other male, the one with yellow hair" be brought out. That would be Lumbo. What was to happen to Naku's new friend?

His meditations were interrupted by a low menacing growl, at his very ear. He whirled over in terror. Nothing was there but the wall. From behind it came another growl. Naku guessed at once that a cave-lion, perhaps several, were penned up next to the mammoths, and that they smelled him where he lay.

"Lions and mammoths," he thought. "These Thunder Folk hold them safe in traps now, and have nothing to fear. But suppose that they, and whatever other animals are captured, should be let loose?" He smiled tightly, and his eyes shone at the thought.

But he remained where he was, perforce, while the sun passed zenith and slid down, down, to the horizon and beneath it. He heard bustlings in the open and, once the takeoff of the flying machine. The enemy sought him afar—not here.

When dark came, he slipped from his hiding.

The Martian camp was lighted here and there by flares of a dozen colors and intensities—the gleam of rays that delved, built or modified things according to the will of their operators. But there were plenty of shadows, and Naku, subtle hunter and woodsman that he was, knew how to take advantage of them, hide in their hearts, pick his course from one to another. Even in the face of passing Martians and robots—there seemed to be more of these latter than before, as though the invaders built new ones of materials prepared in the camp—Naku retraced his steps across the inner wall, up the alley and between the storage sheds until he was again in sight of the cage where he had been held prisoner.

He gazed long and critically through the gloom, and saw only one figure inside—a slender, dejected figure, that of the girl Arla. He approached cautiously and lay in a blot of darkness.

"Arla!" he called softly. "It is Naku,

escaped from the Thunder Folk. I am hungry and thirsty. Is there anything left from your evening meal?"

She turned toward him, made a sign with her hand to show that she understood, and came close to where he had crept up against the bars. First she handed out a bowl of water, which he drained gratefully; then a platter of meat and cooked herbs. Naku began to eat ravenously, but he saw that she trembled and heard her sob to herself.

"You are crying," he said. "Why? They have taken away your brother Lumbo, is that it?"

"Yes," she replied brokenly. "He fought, but the shiny things that look like men but are only walking, wrestling tools—two of them dragged him away. Naku," she addressed him earnestly, "you must leave here, or awful things will happen to you, too."

NAKU emphatically shook his head.

"No, Arla. Up until now, I have outfought and outwitted these powerful Thunder Folk. I shall do so still. I shall not leave here until you are free also."

"But they will catch you and do terrible things. I am afraid that my poor brother—"

"Did they take him to that great round shiny house in the middle?" Naku meant the space-ship. "Listen, Arla. I will go and spy on them. I will save your brother."

He said it as if he already saw a way to succeed, and his confident words put an end to her sobs. She put out a hand between the bars. It was a slim hand but strong, and it clutched Naku's own broad one and seemed to draw strength from him. Naku squeezed her fingers encouragingly.

"Be brave, Arla," he begged. "I will not desert you. I am Naku—wiser and stronger and braver than the Thunder Folk—and I like you." Again she seemed to believe, to win hope from his own confidence. As for Naku, he warmed to her still more.

"Arla," he said, "you are from a stranger people, whose customs I do not know. Do you know what a kiss is?"

"A kiss?" she repeated. "Oh, you mean—like this?"

Their heads came close together, and their mouths touched through the bars. "You must go now," she whispered.

"I will go, but to find and save Lumbo," he replied, and crept away.

Still taking advantage of sheltering patches of shadow, he approached the space-ship. Its ports were mostly open, and one of them gave off light. Naku came to it, and found it above his head. But nearby was a great block of wood, from which the Martians had cut lumps for their building. Naku dragged it close, stood upon it, and peeped into a chamber of the craft—the chamber which the Martians used as a surgical operating room.

CHAPTER VIII

Naku Finds Allies

NAKU could see plainly all that happened in that room.

Upon two raised metal slabs lay prone fig-

ures. The nearest of these was Lumbo, the brother of Arla, fastened down by bands at wrist and ankle, around the middle and the neck. He lay still and pale, but not dead—even though his blond head was cleft apart and a Martian fumbled inside his skull with twiglike fingers. Upon him played a green light, one of those myriad rays with which the Martians accomplished their wonders.

On the other slab sprawled a Martian, the commander himself. But it could not be, Naku mused wonderingly—for near him stood two of his subordinates, and they were plainly doing him harm! One, plying a gleaming instrument like a knife, but with a tip that whirled like a dragon-fly's wing, was making a hole in his brow. The other held the top of his chief's huge cranium and, as the one with the knife cut it away, lifted loose the skull-cap like a bowl.

"Hurry," said the one who stood by the unconscious Lumbo. "We are at the moment for which we have labored these many hours. Spray the brain with the life-ray."

A companion did so, using a nozzle that gushed green light.

"Now, then, into this other cranium."

From the cut-away skull of the Martian commander deft hands drew a crinkled gray lump, like a huge nutmeat. Naku saw it for a brief instant as it was carefully slid into the cleft in Lumbo's head. The operators exclaimed in triumph, and turned on the green light more strongly. It seemed to heal, to some degree, Lumbo's wound, though his brow bulged with the extra volume of brain it now contained. After a moment he stirred, stretched and spoke:

"Unfasten these shackles, someone."

As Naku stared and wondered, the operators hurriedly did so. Lumbo, so lately their prisoner, sat up on the edge of his slab and pointed to the silent form of their commander.

"Throw that carrion away," he directed, and a robot lugged it out through a panel-way.

"I feel splendid," went on Lumbo, stretching luxuriously. "I can understand how the primitive natives of this planet can set so much store by physical health. And my intellect, I am sure, is not impaired by so much as an atom's force."

The Martians agreed sycophantically, and one began to bandage the half-healed cranium. Naku was torn between utter amazement and utter delight. In some way his friend Lumbo had established command over these enemies. Perhaps it was because he had not died of that fearful wound in the head—they might think he was a mighty magician. But then, they had seemed to work hard to cure him. Naku scowled. His own head ached with the labor of trying to understand.

ANOTHER figure entered. It was Ipsar. Lumbo, as the bandage was swaddled around his brow, addressed the priest:

"The operation was a success. It will follow with others, as swiftly as I obtain prime specimens of the human race to replace our own bodies. But I have orders for you."

"Yes," nodded Ipsar respectfully.

"It is possible—probable, even—that we can pass on our mental powers and other characteristics to human progeny; the children, that is, of these new bodies of ours and females of the human race."

"Yes," repeated Ipsar.

"We have one female prisoner. I give her to you for a mate. And now leave me—I have had little enough rest since I arrived."

He stretched out on the slab, and closed his eyes. A robot moved forward, as if on guard. The others departed.

To Naku there were many mysteries. The fact that Lumbo's body was now governed by the Martian chief's brain he could not grasp. The things spoken by that brain through Lumbo's mouth registered only vaguely, smacking to Naku of some strange occult viewpoint. But one thing was certain—Lumbo had told Ipsar that he might have the captive Arla for a mate.

Naku stepped down from his block of wood. He could understand that thing least of all. Did Lumbo think to bribe Ipsar into an alliance? Was he not powerful enough already, in whatever strange way he had taken to seize control of the Martian party? Or was it that he valued his sister lightly, and cared little whom she might marry? Brothers were sometimes like that—but Naku was no brother of Arla. He had other hopes about her.

He saw fat Ipsar, tramping across to the cage, and followed quickly and silently, keeping yet again to the shadows. The priest deftly unfastened the gate and entered. After a moment Naku heard Arla cry out in fear:

"No! Let go of me!"

"Little fool," Ipsar was replying angrily, "you will be far better off than most females—they will become like a race of robots. You, as my mate, will have the advantage of—"

"I cannot understand your talk," Arla gasped. "Let go!"

Naku charged the door, sprang into the cage. Ipsar held Arla by her wrists, but with a single clutch and heave Naku tore the two apart from each other. Then he smote Ipsar in the center of the face that sent him staggering back into a corner.

"Arla is mine," Naku growled at him. "Do not move toward her, or I will kill you."

Ipsar did not move toward Arla. He was tugging something from a loop in his girdle—something that gleamed, even in the dimness of the cage. Naku had seen too many ray-rods in the past day or so to mistake this one. He made a quick, overwhelming lunge. Down went Ipsar again, giving one hoarse howl for assistance. Then Naku's right hand clamped over his mouth, and Naku's left hand imprisoned his weapon arm.

"Run!" Naku bade Arla. "The door is open—run and hide!"

SHE needed no second bidding—she was gone. Naku wrung Ipsar's fat wrist until the ray-rod fell from his hand, then switched his left grip to the throat.

"Traitor!" he growled at the priest. "You
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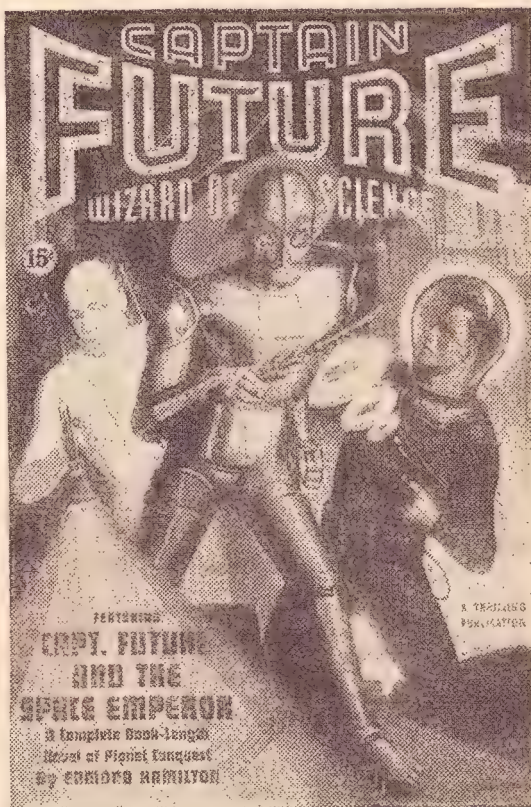
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turn against your own people to help these devils from another star," and his fingers, digging through the frill of red beard, sank into Ipsar's windpipe. Naku rose to his feet, dragging Ipsar with him. He bent the pudgy form across his knee, bent it back, back—he heard the snap of the spine. Ipsar went limp.

Dropping the body, Naku turned to follow Arla into the open, but there was a sudden malevolent clanking, and a robot towered in the doorway. Its face-lamp glowed as it peered in. Its claws held a ray-rod.

In desperation, Naku snatched up a ray-rod of his own—the fallen weapon of Ipsar. He pointed the lens-end toward the figure of metal. His hand found a yielding stud upon the rod's smooth surface, and he pressed it as he had seen the Martians and robots do.

Out gushed a finger-narrow streak of flame, straight at the center of the robot's torso. There was a sudden clangor, a red-hot glow of the creature's metal, and then it fell noisily. Naku, releasing the switch, saw his weapon's ray subside. He ran, jumped across the prostrate robot, and was free.

Arla was nowhere in sight. Like himself, she would know how to take advantage of the shadows. But there was a commotion all through the fortress. Robots were moving hither and thither, singly and in little groups, with Martians stumping around in command.

"I have made too much noise," Naku told himself savagely.

Once again he fled for the only quarter of the camp he knew anything about—between the storehouses, up the alley and to the old rampart wall that was now an inner fence. Up this he swarmed, and a searching Martian saw his silhouette against the night sky, yelled and pointed. There was a rush of feet, both metal and living, as robots and their masters converged in pursuit.

Naku slid down on the other side of the wall, glaring wildly to left and right. He saw once more the pen where the mammoths were confined, the same that had given him such precarious asylum earlier in the day. Again he was inspired.

"Hai, mammoths!" he shouted, rushing up. "Great hairy ones, mountains of meat—prepare to come out and fight for your lives!"

The three mighty things cocked their great fanlike ears, as though they understood. Naku came close and turned his ray-rod against the fastenings of the big barred door.

His pursuers were in sight now, and yelled to each other in triumph. But they did not ray him at once, for he stood among their shelters and possessions, and a flash of heat might destroy other things beside this troublesome human savage. Meanwhile Naku had destroyed the big locked catch, and with all his strength dragged the door back on its hinges.

The largest mammoth, disgruntled at the commotion in front of him, rolled out immediately. The Martians saw that he was free, cried out in alarm, and drew back together in a little group. The mammoth hoisted its trunk, trumpeted, and hurled its

great bulk forward.

The other two scrambled heavily to follow their leader.

Naku, crouching low to let the rush go by, sped on to the next cage.

"Ho, you lions in there!" he cried, in fierce gaiety. "You, too, shall be let out to battle!"

The big cats hissed at his shouts, which they could not understand. But when he rayed the lock from their door and dragged it open, they understood that. Out they came, in a tawny torrent, and dashed in sudden rage for the place of greatest noise and commotion.

WWIL, roused from his laboratory work in a shed near the space ship, ran out into the night to investigate the growing commotion. His meager muscles made it a slow journey to the quarter where the captured animals were kept, and already the mammoths were out and had rushed the party that searched for Naku.

Two Martians and six robots made up that party. Though they had ray-rods, they forebore to use them for a moment, fearing to injure valuable property. After that, it was too late. The biggest beast trod on a robot as on a beetle, smashing it into a welter of case-fragments and wheels and wires, then caught another in his trunk and hurled it far over a shed.

The other robots stood their ground, threatening with their weapons. But the two Martians, able to know fear and caution, retreated into a squat building that housed a half-assembled atomic motor. The two smaller mammoths began systematically to tear it to pieces with their trunks.

"Get into the open!" Wwil yelled to his companions. "Use your rays!" Suiting action to word, he turned his own ray-rod on the biggest mammoth, the full force of the leaping heat-flash striking it broadside in the region of the heart. The monster screamed once, then fell abruptly silent. The flame had torn clear through its huge bulk, killing it instantly. It collapsed, gushing smoke that gave off a disgusting burnt odor, almost overwhelming the robots.

Heartened, the cowering pair in the motor-shed peeped out and levelled their rays. The smallest mammoth, less angry and perhaps more intelligent than his fellows, backed up as by instinct of danger, but the other took the full impact of both discharges in the head, and keeled over heavily upon the hardened pavement. At that moment the fight seemed won.

But other forms were maneuvering in the open space, lithe and menacing forms. The lions were loose. Somewhere farther along sounded the truculent bellow of a awakened bison.

CHAPTER IX

The Battle of the Beasts

NAKU, hurrying down the row of cages, rayed open door after door. All the brute inmates thankfully emerged—the mammoths and lions were quickly joined in

freedom by a bull bison, half a dozen frantic deer, three great apes of a species that ordinarily Naku would avoid, and a vast and grumpy cave-bear. As he freed each, Naku ducked around the corner of the pen, and the beasts gravitated toward the commotion in the center of the open.

Turning from the bear's prison, last of the cages, Naku came face to face with a robot. He lifted the ray-rod, which he regarded by now as a familiar weapon, and pressed the switch; but it gave forth no flame. Its charge was exhausted. The robot took a clanking stride forward, its talons extended to seize Naku.

At that moment something rose behind it, even bulkier and more terrible than itself. The released cave-bear had come erect upon its rear legs, and was as much taller than the robot as the robot was taller than Naku. Two sturdy, shaggy forepaws extended and encircled the round metal torso.

Naku retreated, but over his shoulder he watched the struggle with fascination. The robot tried to jerk free, but the fleshy arms of the bear were too strong for its mechanical lurchings. It reached back a claw, clutched and tweaked a furry shoulder. The bear roared, swung a paw, as a man strikes a fly with a flat palm. The metal skull of the robot, which could turn the most desperate blow of a war-axe, collapsed under the weight of that buffet. The bear shoved the tottering hulk aside and moved toward the thick of the fight.

Naku gained the inner wall and mounted it. Once again he looked back—the animals were being destroyed by freely-used rays, but these same rays had set a dozen fires among inflammable dumps and stores. Even the hardened earth seemed to collapse and reek before the glowing spears of pure heat.

"This place may burn to nothing," Naku told himself. "I must find Arla—yes, and Lumbo. I promised to rescue Lumbo."

He ran back toward the space-ship, not taking so much trouble to stay in the shadows, for he saw neither Martians nor robots. They must have gathered to deal with the loosed animals in the cage-quarter. Once he dared call out for Arla, but there was no response. Perhaps, he considered, she might have won clear from the fortress, would be waiting outside. After he had found Lumbo and helped him to safety, Naku would look for her, find her. That would be pleasant.

He came to the great round hull of the ship, moved cautiously along its side, and located a door. It was shut, but not locked. After a moment he solved the trick of its fastening, pushed it back and entered. Inside, he found himself once more light and springy, as though two-thirds of his weight had been taken away. He was able to move silently down a metal-faced corridor. A table stood against one bulkhead, with a ray-rod upon it. He picked up the weapon, and advanced more confidently.

COMING to the entrance of a compartment, he saw a Martian inside, seated before a complicated mass of machinery—wheels, bobbing levers, electrodes that gave off rhythmic bands of sparks. From the

various terminals rose pulsating rays in all colors of the rainbow. The Martian kept it in operation by constant pressing and shifting of an intricate system of keys, buttons and switches.

"Thunder Creature," Naku addressed the operator, "stop that work."

The Martian turned upon his seat. He looked at the levelled ray-rod, and was afraid.

"You are the human prisoner who escaped," he said shakily to Naku. "Be careful of that thing you hold. It might cause damage—you do not know its power—"

"But I do know its power," Naku assured him. "With another thing like it I have killed some of your brothers, and have burned open the doors of all the prisons in which you held beasts. What is that tangle of stuff you work with, making to move and light up? It is a tool, I think, like the flying house and the man-shapes with lamps in their heads."

The Martian, helpless but plucky, was silent.

"Tell me, or I will burn it with this weapon," Naku insisted. "No, do not stop to make a lie in your heart. And do not try to catch my eyes, I will not look at them." The ray-rod in his hands threatened the machinery.

"Do not destroy it," begged the Martian. "This is the basic-power machine—the broadcaster of energy to all our affairs. If it were damaged, the flying machine could not lift from the ground, the robots could not move, the very ray-rods could not be charged when exhausted—"

"It seems," broke in Naku, "that without this thing running and dancing and shining like that, you would be weak and easily conquered. Is that not so? Well, I shall wreck it."

He sent a gush of heat-ray into the heart of the mechanism. It grated, emitted a puff of oily vapor, and halted abruptly, its lights dimming.

The Martian gave a wail of dismay, and sprang wildly at him. Naku laughed fiercely, and swung the ray-rod like a club. His assailant went over like a reed in a hurricane, and lay still.

Abruptly, there rose new pandemonium outside, yells of mortal terror from Martian throats. Their lights had gone out, their machines had ceased running. Even their robot slaves, powered by the energy waves from the machine Naku had wrecked, were suddenly stilled. Only the ray-rods, each charged temporarily, remained potent against the heterogeneous swarm of brutes they fought. The Martians began to retreat toward their ship.

It was dark in there, too, but Naku was wise in night movements. He groped along the wall to another opening, from which came a gentle filtering of light. It was a chamber with an open port, and the flickering fires among the cages in the middle distance gave a little glow there—enough for Naku to see a stiff-frozen robot in a corner, a pair of slabs, a shelf of surgical instruments and other materials, and the outstretched form of Lumbo.

HE went to the side of Arla's brother and nudged him.

"Lumbo," he called softly. "It is I, Naku, come to save you. Wake up, Lumbo!"

The blond youth stirred, sighed and awoke. Naku could not see his face in the dimness, but Lumbo evidently recognized him. A gusty snarl came from his mouth, and he sprang without warning upon Naku. A moment later the two were sprawling on the floor, Lumbo above, striking heavily at his would-be rescuer.

"I will kill you, black-hair," he panted between blows.

Naku blocked the worst of the punches with his crossed arms, then, recovering from his half-paralysis of surprise, shot his hands upward and pinned Lumbo's either biceps. With a sudden exertion of all his strength, he whirled the attacker sidewise and off of him. Rolling as he did so, he came up on top, pinning Lumbo against the cold metal floor.

"You are dreaming, Lumbo!" he cried. "I am no enemy, but Naku—we were captives together, and planned to escape and overthrow the Thunder Folk!" As Lumbo struggled, Naku tightened his grip. "Lie still," he warned. "I am stronger than you. If you force me to fight you—"

At those words, Lumbo relaxed.

"You are Naku," he said slowly, as though to inform himself. "Yes—yes, of course I remember. Let me up. We are friends, escaping together."

They rose and went out side by side, Lumbo's hand on Naku's shoulder. Naku decided that the other was still sick, perhaps a bit delirious. His head was heavily bandaged, and Naku remembered the strange behavior of Ipsar after such an experience. But there were other things to consider.

In the open, Naku displayed his ray-rod.

"See," he addressed his friend. "This is a weapon of our enemies. It makes fire—so." And he spurted out flame, into the door of a shed. At once the place blazed up.

"You know how to operate it!" gasped Lumbo, and Naku did not take time to dream that Lumbo's surprise was other than that of joy. He was setting other fires.

"We will burn their whole camp," he announced. "Look, where the strongest fires are. I have let go the animals, and they fight the Thunder Folk."

"Then let us go that way," said Lumbo at once, and started off swiftly, dragging Naku along.

Together they climbed the inner wall that Naku was getting to know well. Behind them the fires Naku had set were growing brighter. The battlefield they now saw was strewn with dead bodies—the beasts of Earth, the men of Mars, the fallen, empty robots—but no living thing stirred.

Lumbo bent over some of the corpses.

"Most of my—most of the garrison must be dead," he pronounced. "The expedition is a failure."

"The animals are all slain, too," added Naku. He hurried to the pen where the mammoths had been kept. Its wooden joinings were afire, and the earthen roof flaking to bits. He could plainly see the interior.

With a cry of pleasure, he rushed in and snatched up something round and white, that had miraculously escaped the trampling feet of the mammoths. Then he hurried back to Lumbo.

"Look," he said. "This shell, that Ipsar wore, helped me to do what I have done. When I wore it, the language of the Thunder Folk was lost to me, and the will-power they exerted over me was brought to nothing."

"Is that true?" demanded Lumbo sharply. With a forefinger he tapped the shell experimentally. "Hmmm," he said as though to himself. "It is not impossible—no. Made by nature as an absolutely tight vessel, with no single orifice—then transmuted by ages into inert stone, of the finest insulating elements—it could prove practicable, though we never guessed it—"

NAKU did not know what the other was mumbling about.

"I wore it thus," went on Naku, and donned it.

Lumbo was talking on—but in the purring language of the Martians.

Naku stared, felt a coldness of fear about his heart, and lifted the thing from his head. Immediately he understood again.

"Do not put it on a second time," Lumbo commanded him earnestly, and fixed Naku's eyes with his. "Give it to me."

Submissively Naku handed the shell over, and Lumbo hurled it down. With a powerful kick he smashed it. His eyes held Naku's.

"You will obey me," he said.

"I will obey you," agreed Naku, "but what—what—"

"You cannot comprehend, of course. Let me say it simply. You call me by the name of your friend, Lumbo. This is his body—but the mind is that of another. Yes, the mind of the chief of your foe. Without that petrified shell that deflected the will-impulses from your head, you can understand me. I hold you as my slave, my robot, my tool."

Naku stared, stood silent. "I will obey you," he said again.

"This place burns," spoke the Martian commander through the lips of Lumbo. "The ray-blasts are fiercer than the fires you know. The flame they began will destroy even tiles, even metals. But we will get away. I shall survive, with you for my slave, until more of my people—in space-ships—"

Neither he nor Naku heard the stealthy feat that had come up behind him. But now Lumbo's eyes, still holding Naku's, bulged almost from his head. His mouth fell open, but speech died in it.

His body drew up stiffly, his hands flung themselves out.

Through the center of his naked breast something came into view, like a serpent rising from a pool.

It was blood-dyed, keen, the point of one of the great blades with which some of the robots had been armed.

Lumbo crumpled down upon his face. And his slayer, who drew forth the weapon, was Arla.

CHAPTER X

Vwil's Farewell

NAKU, himself again, gazed at the girl with new wonder. Then he sprang around Lumbo's body, and caught her in his arms. And she wept as though her heart was smashed within her.

"I killed him, my brother—no, not my brother!"

"No, he was not your brother," agreed Naku, "but how did you know?"

"He spoke with the tongue of the Thunder Folk. I could not understand, but I knew that the enemy had gone into him. His heart was no longer Lumbo's heart. Oh, Naku, have I done well?"

"You have done well," said Naku, and comforted her. His eyes darted here and there. The fires were feeding everywhere, greater and wider and brighter. He drew her away from them, toward an unburnt quarter. As their flames followed, he led her farther and farther. They retreated toward the cen-

then down another. They came to a central chamber, stacked high with cylindrical drums.

"This is all the fuel that is left," panted Vwil. "Bring it." He hoisted a container, Naku seized three, and Arla two more. They hurried down yet another passageway, and arrived at the far side of the ship. Here Vwil flung upward a great slide that revealed the open, and began to roll forth a little fish-shaped car, similar to the space ship itself in form but on a much smaller scale. It ran upon a little landing gear, and with Naku's muscular help, Vwil got it into the clear.

"It is a life-rocket, not dependent on the energy-broadcast machinery," he explained. "It will carry us away. Go back, Naku, for the rest of the rocket fuel, while I pour this into the tanks."

Naku obeyed, making several trips. At last Vwil motioned them into the tiny compartment that did service as cabin and control-chamber, and devoted himself to the controls. There was a roar, a shudder of the vessel.

●
NEXT MONTH
●

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IN THE SPECIAL SCIENTIFCTION NOVEL SECTION
●

ter, where lay the space-ship.

Arla recovered herself, and gazed about dauntlessly. Grief could harrow her, but not danger.

"This place burns, and all its devils with it," she ventured.

"And we too," replied Naku.

"But we have won," was her almost joyous rejoinder. "Our death will be a good one. Every one of the Thunder Folk gone—"

"No, not all!" exclaimed Naku, and sprang forward, ready to do battle with his fists, his only weapons. A gaunt, high-skulled figure hurried heavily toward them, a surviving Martian. But one claw-hand was lifted in truce.

"Is it you, Naku?" panted the anxious voice of Vwil. "Come, I can save you."

"How?" demanded Naku. "The fire is all around us—but wait, your chief said, when he spoke from my friend's body, that there was a way. Lead, but no treachery."

The three hurried to the space-ship and into it. Down a corridor Vwil led the way,

IT was so. Vwil flew them high into the night air, then made a landing at the rim of the valley. They came out again, and looked down at the flaming structures that were once the stronghold of Earth's invaders and would-be conquerors.

"Will you slay this one, too?" whispered Arla to Naku as they emerged, but he shook his head.

"Vwil is kind. He alone seemed to be a friend when I was a prisoner. And he has now saved our lives, when he could have left us in the midst of that fire."

Vwil, too, came into the open.

"I have checked the equipment," he announced. "Emergency rations, water enough, and the fuel, though it would hardly stir the big ship, will carry this little one all the way home."

"Home to your star?" demanded Naku. "Is that where you go?"

"Where else?" smiled Vwil. "This world has hardly been hospitable."

"But you will bring back others to fight and kill us."

Vwil shook his domed head.

"No. I go to make a report to my people that your world is uninhabitable."

Naku looked his incomprehension, and Vwil elaborated:

"My commander used to say harsh things about my soft weakness. He scorned me for being merciful. Perhaps he was right—but he is dead, and I alone am left. My judgment must suffice. And I want nothing else to do with you men."

"We fight hard," agreed Naku.

"I am not even sure that we would win a permanent victory over you," went on Vwil. "You might be defeated temporarily, then rally and wipe us out. And we of my world are not seeking to die; we are seeking to live."

Naku felt a sudden burst of warm generosity.

"Vwil," he said, "your kindness counts for something. Perhaps we can live in peace, if we make every effort—"

"No, my friend," broke in Vwil. "You are wrong. You and I might live as neighbors and comrades. But my people are greedy, and yours are stubborn. There could be only war between them. It is better that we keep our ways separate."

He put out his hand, and Naku took it and shook it. Arla, who had understood none of Vwil's talk, did the same.

"And now I will enter my craft," finished Vwil. "I will give you time to get well away from the blast of the rockets. Good-by."

Vwil got into the life-rocket and closed the door. Naku and Arla walked briskly away, far along the rim of the valley. As they did so, they heard the roar of the take-off behind them, and turned to see. But Vwil was no more than a comet in the upper sky, seeming to slide away between the stars.

The two had time to look at each other and smile. It seemed to them that nothing would ever be exciting again, except each other.

"Rrau, the war chief of my people, is dead," said Naku. "Ipsar, the priest, is dead. I am young, but probably I shall rule what is left of us."

"Do your men take more than one wife?" asked Arla, and Naku shook his head.

"One man takes one woman. Come with me, Arla. We shall reach home by morning, and I shall send a messenger to your tribe, with news and offers of friendship. After these dangers, men may learn to live at peace."

VWIL, afar in his lonely little ship, glanced back once. A rearward port showed him the globe of Earth, already falling thousands of miles behind.

"It is a beautiful place, and rich," he sighed to himself, "but I may be forgiven for lying to my people about it. No riches are worth pain and cruelty. We need more room, more food, more water—we shall find some other planet, deserted and wanted by no one. It will be strange if we Martians cannot make of such a place what we want it to be."

Good News for Fantasy Collectors!

DISCOVERED! Three hundred copies of Garret Smith's book, "Between Worlds," containing the classic interplanetary story of all times!

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Mail your orders to THRILLING WONDER STORIES, 22 W. 48th St., New York City, N. Y. Enclose coin, postage stamps of small denominations (1-2-3c) or money order. A perfect copy of "Between Worlds" will be promptly sent you by return mail! Incidentally, Garret Smith is the famous author of "The Moon Metal," "Treasures of Tantalus," and "Slaves of the Wire."

The Reader Speaks



Flashes From Fantasy's Favorites Congratulating THRILLING WONDER STORIES on Its Change to a Monthly!

Ray Cummings: "Congratulations! I've been rooting for THRILLING WONDER STORIES to go monthly—and here's wishing you all the success in the Universe!"

Eando Binder: "Twelve issues a year now! Thanks a dozen—and we'll be seeing you in print!"

Henry Kuttner: "I'm glad. Hollywood-on-the-Moon is glad. And Tony Quade is glad. Best wishes, and here's hoping T.W.S. goes bi-weekly!"

Arthur K. Barnes: "Just relayed the news to Gerry Carlyle. She wants a new contract—and a yearly subscription to her favorite mag."

Edmond Hamilton: "It can happen here! It should have happened two years ago! Here's wishing T.W.S. months of perpetual motion."

Virgil Finlay: "Am very happy to learn that T.W.S. has gone monthly! A double measure of good wishes to the best magazine in the field!"

Jack Darrow: "I'm certainly happy to learn of this welcome change."

Jack Williamson: "Here's wishing you a new reader for every one of the stars in the Milky Way. T.W.S.'s new monthly basis has my heartiest endorsement."

Robert Moore Williams: "Over the top at last! Well, stay tops!"

H. W. Wesso: "So—a new issue every month! Good luck."

Manly Wade Wellman: "Congratulations! Every follower of scientifiction will be grateful."

CAPITAL FUN

By J. J. Demaree

Congratulations on a swell October T.W.S.! I found a lot of enjoyment in its pages. Especially amusing was "The Energy Eaters," by Messrs. Kuttner and Barnes. Their subtle humor had me chuckling on every page. That story was entertainment with a capital E! You ought to get Kuttner and Barnes and Kelvin Kent and Edmond "Easy Money" Hamilton, lock them up in a room together

with typewriter and paper, and not release them until they've written something uproarious!

Campbell's novel "Planet of Eternal Night" was also very fine. "Hero" and "Via Venus" were outstanding among the short stories.

Here's hoping for more Campbell, Barnes, Binder, Williamson, Kuttner, Wellman, and Kent.—1103 Mountain Street, Glendale, California.

RANKS AMATEURS TOPS

By John Cunningham

Congratulations on your October issue of T.W.S. I can also quote the same for the September issue of STARTLING STORIES, your companion magazine. I get the greatest joy out of reading the story in the amateur section. I sincerely think that some day the same persons who have had their stories published in this section will become the great science fiction writers of tomorrow.

"Hades," by Charles F. Ksanda, in the amateur section, certainly was a masterpiece, especially considering he is an amateur. Your stories seem to get better every issue—2050 Gilbert Street, Beaumont, Texas.

In this department we shall publish your opinions every month. After all, this is YOUR magazine, and it is edited for YOU. If a story in THRILLING WONDER STORIES fails to click with you, it is up to you to let us know about it. We welcome your letters whether they are complimentary or critical—or contain good old-fashioned brickbats! Write regularly! As many of your letters as possible will be printed herein. We cannot undertake to enter into private correspondence.

BURROUGHS LADS COMING!

By Philip Bronson, Jr.

The October issue of **THRILLING WONDER STORIES** was swell! The cover painting by Brown was good, and speaking of covers—how about one by Paul? His illustrations for "Planet of Eternal Night" were superb. The same goes for the story, which was the best I've seen in many an issue.

Second place goes to "The Energy Eaters" and third to "The Scourge Below." I would like to see another story by the Burroughs boys! They're following right in their dad's footsteps.

I can hardly wait for the next issue knowing that it will contain another Anton York story. The Binder Brothers are fine writers. —224 W. 6th St., Hastings, Minn.

SAYING IT IN VERSE

By F. L. Kutchins

My heart is filled with ecstasy, tonight.

And though I sit, confined within my home,
Four walls shall not constrain my fancy's
flight.

Far out in interstellar space I'll roam.

I'll delve the crater depths on Luna's face.

I'll search the burning sands on planet
Mars.

Then in my rocket ship, on, on I'll race.

I'll cruise around amid the gleaming stars.

Explore the moons of Jupiter, each one,

Chase Halley's comet clear back to its
source.

I'll circle Mercury, then round the sun

Eternally wondering o'er cosmic force.

On Uranus too, and Pluto I shall call,

I'll measure the width of Saturn's Ring.

I'll visit Neptune—gigantic ball.

But I grow weary; I've had my fling.

Just one more stop and I'll call it a day,

I'll pause on Venus, for a moment's rest.

My thoughts, as homeward on, I speed my
way.

Are, after all, to me, "Old Earth is best!"

So, I'll remain contented in the thought,

That bold adventures not at my command,

Until a month has passed and I have bought

My favorite s-f mag at the newsstand!

—1211 W. 15th St., Muncie, Ind.

(Thanks for the sentiments! Incidentally, readers, if you have any scientifi-fiction verse, puzzles, or riddles, send them in!—Ed.)

TIME ON HIS MIND

By E. Earl Bielfeldt

Well, I've bought your magazine for a year, now. It was back last August that I discovered it on the newsstand. I say "discovered," because it was the first time I had taken it out of the racks, looked it over. I had been seeing it on the stands for lo, these many moons, without giving it much thought. But this time I bought a copy. I'm still buying it, and I like each issue more than the last.

I can say that in the past year, T.W.S. has published some of the best stories I have read in a long time. That doesn't exclude the "Hollywood on the Moon" series by any means. Those are excellent. More, please. I won't try to rate the stories, because they would all be in first or second places. That's not the bunkum, either. I mean it.

Then came June. Get ready for exclamation points. There was nothing ever to equal it! It was tops! Six full pages of s-f authors and illustrators, not to mention a bunch of stories that were tops, or better. I can't wait for the fifteenth anniversary.

Which brings me to illustrations. Since Finlay has been added to your staff, I'm for you 100%. He, in my humble opinion, is the best illustrator to be found in the field. His technique is marvelous. Who doesn't admire his superb line drawing and his stipple shading?

Alex Schomburg is very good, too. I noticed his work in the first T.W.S. I ever bought, and thought that he was the best in the mag. Now he's second best. Jack Binder varies.

So you won't print time-traveling stories, eh? Other mags do, with little or no criticism. What are you afraid of? You can't please everyone. Have you ever printed any?

Try it, and see what happens. Perhaps they are unbelievable. But who knows?—Maple and Cherry Lanes, Thornton, Ill.

(An excellent time-traveling novelet, **THE TIME CHEATERS**, by Eando Binder, coming soon! And we've published time yarns in the past: "The Time Twin," by Lyle D. Gunn; "Circle of Zero," by Stanley G. Weinbaum; and "A Month a Minute," by Ralph Milne Farley, are but a few of the best we've run. —Ed.)

ALL FOR PAUL

By N. Winters

Although I've been a reader of T.W.S. ever since its inception, I never yet have written to your mag. I say you're doing fine. There's just one thing I'd like to see in its pages. Serials! That's what "made" the old Wonder.

The October issue led with that short story, "Experiment With Destiny." "Via Venus" comes next. I don't care for Hollywood on the Moon stories, so I won't comment on that story. I wish you'd have Paul illustrate the whole issue. His decorations for "Planet of Eternal Night" were typically Paulistic. IF is always good.—Rochester, N. Y.

By Ray R. Wilson

I have several brickbats to hurl, but first some roses.

THRILLING WONDER STORIES is once again a magazine; one that I can look forward to. Stories, features, departments, etc., are o.k.

Now for the pop bottles and brickbats.

There is a danger of your going in for too many Earth-menaced stories. Always it's Earth that is threatened. Never Mars, Venus, or some other race. Mankind is always in danger. Couldn't we have a few stories written strictly from a Martian's viewpoint? There are several possible plots I can think of offhand. A time-travel yarn from a Martian's angle. A period in Venusian history, told through the eyes of a Venusian inhabitant. Get the idea?

My first choice for the October issue is "Via Venus," because of its realism. Second, "The Energy Eaters," because of its humor. Third, "The Scourge Below," for its new twist on a hackneyed plot.—1221 Washington Street, Wilmington, Delaware.

(Part of **DAY OF THE CONQUERORS**, in the current issue, is told from a Martian's viewpoint. See **MIND OVER MATTER**, by Oscar J. Friend, in the current **STARTLING STORIES**.—Ed.)

NOTES IMPROVEMENT

By Jean Bogert

I don't know whether I've ever sent a letter or not to this department. I am a little embarrassed at doing so. First a brickbat. Why don't we see more stories like "The Time Twin"? The idea is unusual. Now, was that so painful?

Why not more Penton and Blake? Are they going to explore the other worlds? As for the **SFTPOBEMOTCOSFP**, I like bug-eyed monsters on mag covers very much . . . the uglier the better.

I warn you, you will probably receive an attempt on a story from me. I'm only sixteen, but I've been writing stories since the 7th grade. I hope they've improved since then. I am glad to see there will be another Anton York very soon. I enjoy those stories very much. Pete Manx is a favorite with me, too. I am glad there will be another of him later.

The story, "Experiment With Destiny," was very good. The Tony Quade-Gerry Carlyle story was the best in the series, nosing out

(Continued on page 116)

EVERYDAY ASTROLOGY

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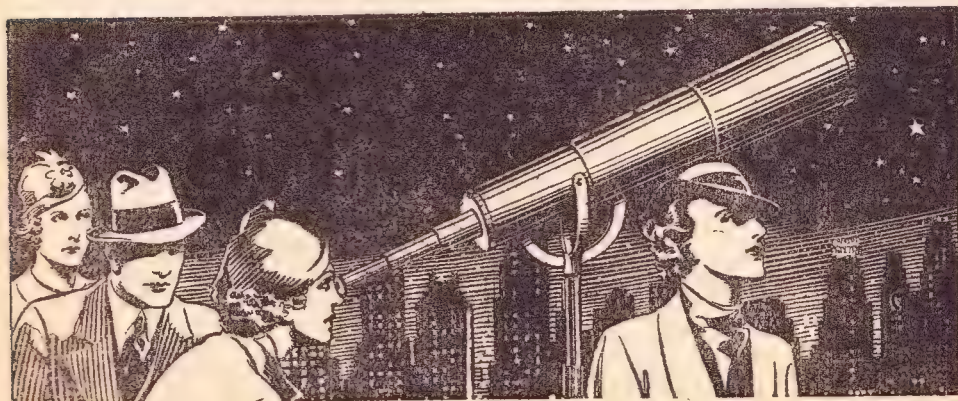


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the former yarn by the slightest margin. "Via Venus" rated third place. Altogether, the October issue was very good, far above the average. **THRILLING WONDER STORIES** improves all the time.—6447 Overbrook Ave., Overbrook, Pa.

THE HIT PARADE

By Bill Brudy

Viewed alongside the rest of the market your yarns have held their own very well during the past year, and since you so courteously continue welcoming readers' opinions, I'll add the sound and fury of my own to the general babble, plus a mixture of advice, comment, and possible condemnation.

From top to bottom the stories rate like this:

TOP MONEY: "Passage to Saturn"—(Williamson at his flawless best.) "Hands Across the Void"—(Let's see more of Garth.) "The Ultimate Catalyst"—(and I once condemned Taine!) "Experiment"—(A case history with a wallop.)

ABOVE AVERAGE: "Flight of the Star-shell"—(Fate snips her shears and you love it.) "The Jules Verne Express"—(Good—but the Binders are too prolific.) "The Star Parade"—(S-f characters that are funny. Marvelous!) "Dawn of Flame"—(Margaret of Urbs, capricious as ever, but below "The Black Flame.") "Robot Nemesis"—(You'll choke on Smith's ponderous phraseology.) "Dweller in Outer Darkness"—(Now I'm afraid to turn out the lights.) "The Warning From the Past"—(Simply but powerfully written.) "Roman Holiday"—(Good—if you like this screwball comedy.)

SO-SO: "Zeoh-X"—(And Cummings used to be tops.) "White Barrier"—(Decidedly vague.) "Men Must Die"—(Interesting, but sluggish.) "The Telepathic Tomb"—(Hereditage takes a beating.) "Invasion's End"—(Ants from Mars.) "The Discarded Veil"—(Mr. Burks, after all you've done!) "The Human Equation"—(They're stealing carbon in this one.) "Cosmic Cube"—(Good try.) "The Man Without a World." (Leave it to Dad, boys.) "The Stolen Centuries"—(Fate takes another snip.)

Ho-hum: "Moon of Intoxication"—(Filler.) "No More Friction"—(Dr. Keller, go stand in the corner!) "The Man From Xenon"—(Do you buy Coblenz of your own free will, or has he got something on you?) "The Time Twin"—(You won't believe a word of it.) "Beyond Annihilation"—(Or this either.) "Madness From Mars"—(Madness From Simak.)

Your long feature novel is a great idea, but don't let it slip lower than it did in the August issue, or you'll find yourself stuck with it. Whoever originated the spider-man motif in science fiction should be exiled to Mercury without sun-glasses. "Race Around the Moon" lost whatever element of reality it might have had simply because of a screwy idea that readers will accept spider-man stuff. And will somebody kindly explain to me how the inevitable stowaway manages to slip aboard a fast interplanetary craft?

However, the illustrations for Kline's story were excellent. Finlay outdid himself. I see you are promising to give us a Williamson novel soon. When you do, by all means assign the art work to Finlay. As fine a writer as Williamson deserves a decent job of illustrating.

While we're on the subject, let me say that I think he is far and away the best writer in the science fiction field, topping even Stuart and Burks, who tag along in second and third. Williamson has the rare faculty of writing an intense story with fast action and completely believable characters without any tricks, sensationalism, or jaw-breaking terms. Like Weinbaum, his utter simplicity is the secret of his success.

Your cover contest is a novelty, if nothing else. It puts the reader in a rather peculiar position—behind the 8-ball. Can it be that there is open rebellion among the editors and that in their subtle way they plan to wreak vengeance on all the hecklers who talk a good story? By being put on the spot thus,

it may be that some will not stick their necks out so far henceforth.

While you're experimenting with the cover, why not brighten it up? You use too many greens and purples, excepting the June number, which was treason of the bloodiest variety. Why didn't you try a good planetary cover instead of that grotesque cartoon? It was hideous. Tenth Anniversary, my eye! The first couldn't have been worse. I am moved to apply for a charter membership in the Inspired Society for the Prevention of Bug-Eyed Monsters, etc., etc. Martin Alger really has something there!—Wolverine, Michigan.

SERIOUS ABOUT SERIALS

By Howard D. Miller

I have been reading **THRILLING WONDER STORIES** for a year now, and I thought that it was time to write and tell you how much I enjoy your magazine. I guess that your mag is about the best in science fiction, but I have a few suggestions; you can do what you want with them.

I wish that you would give the readers a science-fiction test, as Mr. Richard Meyer suggested. I approve of the idea of a complete novel each issue, but to do this you've got to cut out a couple short stories or a novelet. So why not cut out a couple more short stories or something and print a serial? I found that some of the best stories I have ever read were serials.

Most of your illustrations are good, but I have a suggestion in that line too. Some of the illustrations take up a page and a half, some only about half the page. Why don't you do as you did in the old *Wonder*—put a full page illustration opposite the first page of each story?

My favorite story for the Oct., 1939 issue was "The Energy Eaters." "Via Venus" and "Hades" were also good.—1281 Albany Ave., Hartford, Conn.

TOO MUCH SCIENCE?

By William Harris Schrader

As per your invitation to write what I think about your magazine:

I enjoy science fiction from a reading viewpoint. Many would-be readers would enjoy it just as much as I do, but they find it crammed with scientific data that they cannot understand and is dull. They want action and romance. In the stories in your current and a couple of other issues I have read, you are including too much science and not enough romance.

I believe you operate your magazine for a profit. Put stories in it that the public will want to read when they pick it up on the newsstand. Get enough copies selling in that manner, and you can afford to publish another magazine crammed full with scientific details for those hombies who THINK they're scientists but seldom ever go beyond a copy of the science-fiction magazines, a chemistry book and in a few exceptions the Britannica and a few other books.

I do not pretend to be a scientist. I never want to be. There's too much to remember and I'm the laziest hombie in existence barring none. And although I've never written a science-fiction yarn, I'll wager I could cram it full of scientific data if not good reading material. You see I am a photographer by hobby and a botanist by profession.

I use cameras to show other people what I find and how for them to find the same things. Both are hobbies in reality, because I have never learned how to work. So let's see more entertaining stories, thereby bringing more people into the Science-fiction league, which I hereby wish to join, application enclosed. Thanks. 636½ N. Genesee St., Los Angeles, California.

(Romance is always welcome in the pages of T.W.S. But are our stories overly scientific? And do our readers want them graced with heavy scientific trimmings? Come on, readers, let us know what you think on this subject!—Ed.)



A BIOLOGIST experiments with deadly microbes and eventually finds a cure for a previously fatal malady. Result—man can live longer!

A chemist toils in the laboratory, testing formula after formula. And, more often than not, he perfects a new compound. Result—man can manufacture some costly material inexpensively!

But what of the men who devote the energies of a lifetime toward the study of a pure science? How can a physicist—by telling us how minute our planet is, as compared with the rest of the Universe—benefit humanity? How does a geologist earn his salt? A mathematician? An astronomer?

Professor Albert Einstein, the famed originator of the theory of relativity, has a lot to say on the subject of science for science's sake. He holds that the pure scientist is spurred on to his work, not by a desire to add to human comfort nor for technological progress, but merely to arrive at a more comprehensible perspective of the nature of the Universe.

The theories resulting from the physicist's work, for example, have their birth in speculation and are the product of observation and experience. They lead, Professor Einstein says, to a simplification of our knowledge. For man's burning ambition is to know the truth.

And we agree. The real mysteries of the Universe—and there are many—are as yet unlocked. It remains for the theorists of today, the speculators, to pave the way for the men of tomorrow. The pure scientists of today are looking forward, unshackled by the constricting coils of convention. And **THRILLING WONDER STORIES**, a magazine dedicated to

the future, is on their side. Here's more power to them!

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Can there be anything new in scientification? We say yes—and offer **CAPTAIN FUTURE**.

Fellows, **CAPTAIN FUTURE** is tops in scientification! A brand-new book-length magazine novel devoted exclusively to a star-studded quartet of the most glamorous characters in the Universe. And the most colorful planeteer in the Solar System to lead them—Captain Future. You'll find Captain Future the Man of Tomorrow! His adventures will appear in each and every issue of the magazine that bears his name.

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ing magazine ever to appear on the scien-
tification horizon the once-over.

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tasy at its unbeatable best.

Look the issue over and let us know what
you think of it.

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ment section features the first part of the
greatest science fiction classic of all time—
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H. Keller. This is the startling story of an
immortal intelligence that rules the world.

Short stories included in the first issue are
by Eric Frank Russell and Oliver Saari.
Brand-new scientific departments include:
THE WORLDS OF TOMORROW, THE
FUTUREMEN, THE MARCH OF
SCIENCE, and UNDER OBSERVATION.

We'll be waiting for your suggestions and
criticisms.

STARTLING STORIES

The coming March issue of STARTLING
STORIES will feature a complete book-
length novel of a stolen city by one of
THRILLING WONDER STORIES' fa-
vorite writers—Henry Kuttner. It's a story
of the newsreel cameramen of tomorrow
who scour the Solar System, searching for
sensational scoops. In Kuttner's novel,
WHEN NEW YORK VANISHED, they

find a scoop—but it's right here on Earth!
Don't fail to read this thrilling story of a
missing metropolis!

Stanley G. Weinbaum's distinctive story,
VALLEY OF DREAMS, is the masterpiece
selected for HALL OF FAME honors in
the March number. This story is a sequel
to the famed "A Martian Odyssey." Even if
you've missed the first story you'll find this
one complete in itself, and thoroughly en-
tertaining.

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tures in the March number of STARTLING
STORIES. Streamlined scientific fact, fic-
tion and features from cover to cover!

AMATEUR STORY CONTEST

THRILLING WONDER STORIES still
continues its national hunt for new stories
by new authors. It is the only scientifi-
cation magazine publishing stories by its own read-
ers! We believe that every one of our
readers has an entertaining story to tell—
and we'd like to see it.

Write up that pet interplanetary or time-
traveling idea you've been hoarding to your-
self for all these years. Type it up, double-
spaced, on regular manuscript paper, and
send it to AMATEUR WRITER'S EDI-
TOR, THRILLING WONDER STORIES,
22 W. 48th St., New York City. Enclose
a stamped, self-addressed envelope for the
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able.

If your story is a fairly good one, we will
be glad to publish it in T.W.S. Prize stories
are purchased at the same rates paid to our
regular staff writers. We want to present a
brand-new writer in every issue, if possible.
Why not try for the honor?

THE WINNER!

Elsewhere in this issue appears Nicholas
Kenealy's prize amateur story, CONQUIS-
TADORES FROM BEYOND. Mr. Ken-
ealy is the fourth new writer to break into
print in THRILLING WONDER STO-
RIES. Now that T.W.S. has gone monthly,
we hope to select twelve winners a year!

Honorable Mentions in the last contest
are awarded to: William E. Tredwell, 65
Maitland St., Toronto, Canada; Clarence
Granoski, Browns Valley, Minn., Harry
Warner, Jr., 303 Bryan Place, Hagerstown,
Maine.

CONTEST NEWS

THRILLING WONDER STORIES
would like to conduct interesting, exciting
contests as often as possible. Have you any
ideas for unique contests, based on science
fiction? If so, send your suggestions in to
the editor. The most feasible suggestions
will be published in THE READER
SPEAKS. Authors will receive an original
illustration by any of their favorite science
fiction artists! So if you want an original
fantasy drawing to decorate your den, send
us suggestions for brand-new contests right
away!

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THRILLING WONDER STORIES and
the date can be seen). You will send
me my membership certificate and a
list of rules promptly. (Foreign read-
ers must send an International Reply
Coupon, or American stamps, with their
applications or they cannot be accept-
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Have you joined the **SCIENCE FICTION LEAGUE** yet? It's an international organization composed of the world's most enthusiastic followers of science fiction—and it fosters that intangible bond between all science fiction readers. Just fill out the application blank provided on page 118.

To obtain a **FREE** certificate of membership, tear off the namestrip of the cover of this magazine, so that the date and title of the magazine show, and send it to **SCIENCE FICTION LEAGUE**, 22 W. 48th St., New York City, enclosing a stamped, self-addressed envelope.

And readers—write the editor of **THRILLING WONDER STORIES** a regular monthly letter. Tell us the type of stories you want, the features you like, the contests you would like to see. Your suggestions and criticisms are helping to make **T.W.S.** the magazine **YOU** like best.



CHAPTER NEWS AND GENERAL ACTIVITIES SAN FRANCISCO

Louis Goldstone, Jr., of 622 Presido Avenue, San Francisco, Calif., is interested in forming a Chapter of the **LEAGUE** in his city. Readers of **T.W.S.** residing in the vicinity are urged to communicate with Mr. Goldstone immediately. Five **T.W.S.** League members are required to form a Chapter.

PITTSBURGH

Henry D. Goldman, of 3118 Perrysville Ave., N.S. Pittsburgh, Pa., would like to organize a

fantasy club in his city. Those in the vicinity, drop a post card to Mr. Goldman.

SKOWHEGAN, MAINE

James S. Avery announces the formation of Maine's first science fiction organization, The **Maine SCIENTIFICTION ASSOCIATION**. Anyone in the State of Maine is cordially invited to join. Applicants should write to Mr. Avery at his address, 55 Middle St., Skowhegan, Maine.

THE QUEENS SCIENCE FICTION LEAGUE MEETING OF SEPTEMBER 10, 1939

First meeting of the new season, on Sept. 10, turned out huge success. 32 persons attending, including Malcolm Jameson, well known author, who joined the Queens SFL, Mr. Willy Ley, J. D. Clark, Chas. D. Horning, Julius Schwartz, Will Sykora, Sam Moskowitz, John Giunta, and other members, and the Women Auxiliary.

The Program Committee then gave their "10 Point Plan of Work" for 1939-40, which included making a motion picture, reviews of pro mags, club activities, and others. Moskowitz added to this recreation activities.

Celebrities were at this time introduced. First Mr. Malcolm Jameson, sfiction author, followed by Mr. Willy Ley, Chas. D. Horning, and John D. Clark.

Nine sfiction fans became members; they are E. Korshak, of Chicago, Mr. M. Jameson, Bill Groveman, Norman Levine, Scott Feldman, Walter Lincoff, Herbert Goudket, T. A. Hogue, Dick Burns.—**MARIO RACIC, Jr.**, Secretary-Treas.

NEW MEMBERS UNITED STATES

John Cunningham, Beaumont, Tex.; C. Paradis, Jr., Skowhegan, Me.; Jim Jones, Oak Hill, Ohio; Harold Underhill, Fort Snelling, Minn.; Earl Clark, Bethlehem, Pa.; Joseph Klick, East Rochester, N. Y.; Richard Iannotti, Waterbury, Conn.; Sidney Hagan, Moberg, S. D.; Joe Gonzales, Seattle, Wash.; Walter Danziri, Torrington, Conn.; Charles M. Price, Chicago, Ill.; Rus Abrolat, Jr., Elizabeth, N. J.; Jack Ross, Union City, N. J.; Wm. Harris Schrader, Los Angeles, Calif.; Anthony N. Thomas, Chicago, Ill.; J. D. Hartman, Santa Barbara, Calif.; John Irwin, Kilgore, Tex.; Arthur L. Johnson, Stafford, Kans.; George O. Winston, Jr., Washington, D. C.; Andrew Nichols, Milner, Colo.; Manny Rock, Brooklyn, N. Y.; Perry Wales, Chicago, Ill.; Joe Geller, Hempstead, N. Y.; Jack J. Bluff, Snohomish, Wash.; Don Sarell, Denver, Colo.; Walter O. Miles, Los Angeles, Calif.

FOREIGN

Joseph Phipps, Reford, Trinidad, B.W.I.; Jack Heaton, Brockville, Ontario; Gordon R. Nelson, Anchorage, Alaska.

13

GRIPPING TALES OF THE UNCANNY
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STRANGE STORIES

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The Story Behind the Story

NINE planets whirl around our solar sphere. Some too hot for human habitation . . . some too cold. Mercury, astronomers declare, lies so close to the sun that it does not appear to be favorably situated for life in any form. It turns the same side toward the sun year in and year out, and that half of the planet is perpetually baked at a temperature characteristic of molten lead.

The other side of the planet abides in everlasting darkness at a temperature of 450° below zero! Certainly, that world is ruled out as the possible abode for human life. And so it is with bleak, dark Pluto—which is too cold. Jupiter succumbs, too, because of its crushing gravitation and noxious gaseous vapors.

Nine little planets . . . and soon there are practically none. Some too hot, some too cold, some too big. In the light of present-day astronomical observations, we must admit that very few of the sun's family members could conceivably sponsor human life.

But how about *inhuman* life? Life especially adapted to the extremely unfavorable conditions, life that doesn't exist as we *know* it. Flame beings depending on the sun's electric-furnace heat for energy. Crystalline life, perfectly at home in the most frigid atmosphere. Vapor intelligences, created by Nature to defy adverse gravities.

Inhuman life! That's where the followers of science fiction are a light-year ahead of the telescopic-prophets. For just as on Earth sentient life can exist in the freezing Arctic wastes, the torrid jungles, the sea's greatest depths—so we know it is possible for alien, unique life-forms to exist on each of our planetary neighbors, equipped mysteriously to combat every force known to science!

DESIGNS FOR LIVING

By way of illustrating what we mean about specially adapted organisms, the parade of science fiction's memorable interplanetary life-forms is marching again! This time they're here under the banner of Robert Arthur, author of *SONG AT TWILIGHT*, featured in this issue. Following in the haloed footsteps of Weinbaum's "Tweel," Kuttner's "Bill the Bouncer," Barnes' "Murri," and Campbell's "Pipeline," Robert Arthur contributes to the extra-terrestrial cargo with Mr. Echo, the talking, singing minstrel.

Incidentally, you'll recognize *SONG AT TWILIGHT* as the first of the new streamlined Judge Hardy Family of Tomorrow series we've been forecasting for several issues. If you think the space-trotting domestic quartet justifies our ballyhoo let us know . . . and we'll get Mr. Arthur to take the Abbott Family on another spatial cruise

right away. In the meanwhile, lend an ear to the amusing reverberations of Little Sir Echo of the future!

Dear Editor:

You asked me for a few words about the Abbott family and *SONG AT TWILIGHT*. Here they are if I can get them out. The place is knee deep in notes which I have been trying to piece together in order. The Abbotts left them here for me to sort out when they blasted off for Mars three weeks ago, to get Tommy into school there for the Spring term. (They won't succeed. I have a feeling. I know that Tommy.) And—But just a second. The phone's ringing.

False alarm! It was Echo. He had crawled under the telephone stand and has been ringing there, off and on, all afternoon. No wonder the line's been dead when I answered so many times. I don't quite know what to do with him. In a way he's handy to have around—keeps the place free of flies and mosquitoes, though we had the devil of a time one night, the first time he ever heard a mosquito. He was out on the balcony, buzz-buzzing all night long, and in the morning we found the place swarming with male mosquitoes. He'd been concentrating on the hum of the female!

But he's a nuisance in other ways, too. We took him along in the car when we drove up to the country last week-end, and promptly developed a hideous body squeak that we almost went daffy trying to locate. Finally we traced it. Yeah, Echo. The peculiar note of the squeak fascinated him, and long after it stopped he kept squeaking to himself for the fun of it.

That isn't getting me ahead very fast, though. Frankly, I don't know just what to tell you about the Abbotts. They're the first space-trotting family group that I know of. Ann complains bitterly about never being at home, and when she is there is always restless to be blasting off again. Lani and Tommy, of course, were practically born and raised in space. Jim's job calls for a lot of moving around, and it suits them fine.

It used to be thought bad luck to have a woman aboard a rocket. But Ann smashed that superstition into blast dust. And it's their example that is giving impetus to the re-design of rockets that you may have noticed. They're already being made into complete living units, like the *Sky-Hi*, as standard practice. And probably with the Abbotts' example more families will start discovering what worlds across the void are like.

Imagine the backseat driving that's going to develop when some tin-can tourist piloting a trailer job heads for Mars and makes a miscalculation that brings him up on one of Saturn's rings!

The Abbotts, though, are—well, they're just the Abbotts. That's all I can say about them. Just normal, adventurous people, maybe a little reckless at times, or a little foolhardy, very fond of one another. And for that reason apt to fight among themselves. They—

Damn! Echo's ringing again. I have to go in and answer him—I mean throttle him. Now he's yelling, like the baby when it's got a pin sticking into it. I've got to go in and shut him up before the neighbors get the idea I'm beating the kid and call a cop. Echo just lowered his tone to a piercing scream, and I'll have to hurry. I'll write you what you want tomorrow. Positively!

Good-by now.

TIME'S DAWN

Earth's eternal clock keeps ticking. Immeasurable eons ago the world was created.

(Continued on page 122)



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If you are looking for a **NEW** and **BETTER** way to make a living, take up Swedish Massage, for now you can learn at home. This interesting big pay profession was for years available only to a few. Its secrets were guarded jealously and fabulous prices were paid for instruction. This same instruction is now available to you at a mere fraction of the former price and you need not leave your present work until you have qualified as an expert and can command an expert's pay. The demand for **BOTH MEN AND WOMEN** has shown a steady increase and few, if any, have ever lacked employment.

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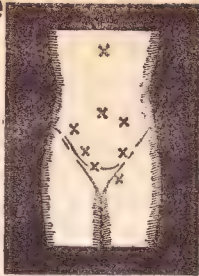
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T. G. Cooke, Dept. 7961, 1920 Sunnyside Ave., Chicago

(Continued from page 120)

Countless centuries hence the world will come to some sudden, unpredictable end. And, lost in the procession of the interminable years, man's span of life on Earth represents less than a minute on the eternal clock. At least, that is what geologists tell us.

Puny man, forgetful of the endless years of past and future, regards his brief span on Earth as one of human conquest. Ever since man first appeared on the surface of this planet—some insignificant thousands of years ago—he has been the dominating life factor. But that's what he thinks, Manly Wade Wellman claims!

Superior beings may once have walked our planet, as far back as at time's dawn, when man was only a savage, he holds. At any rate, that's the foundation for **DAY OF THE CONQUERORS**, a novel of yesterday. Here's how the author explains the basis for his tale:

During the past summer, as Mars came closer and closer to Earth, I thought (most science fiction fans undoubtedly had the same fancy) of the possibility of a Martian invasion. Far from thinking such a thing impossible, I wondered why ancient, advanced Mars hadn't jumped us up before. Then I wondered if, indeed, there had been an invasion—unsuccessful.

I turned over in my mind many legends, some of the oldest known to man. I believe that in every fairy tale, myth or legend there is a kernel of truth—and some of them spoke pretty loudly of strange enemies coming down from heaven and being defeated. There I had it. And **THE DAY OF THE CONQUERORS** is, by comparison, a realistic treatment of the evidence of those myths and legends.

Some may challenge the quickness with which my savage stone-age men learn to use weapons and tools of the Martians; but savages are ever quick to learn, as pioneers in Africa, the South Seas, and our own Old West, could tell. And Upper Paleolithic men, such as the Cro-Magnon race, had amazing brain equipment—taller brows and bigger skull capacities than we, their degenerate children!

I could not resist the introduction of a sympathetic invader—call it wishful thinking if you like. I have said before, and will say again, that should there prove to be intelligent life on other worlds, it will behave us in the future to understand and befriend, not suspect and fight, such creatures. Of course, we can't get along even with brother human beings, so I may be asking too much.

CHAIN OF MYSTERY

What would be more startling than landing on Mars and finding Martians? The answer is—finding Earthmen! So with the pyramids discovered by the first men to explore the planet, Venus. Had the men in Venus Expedition Number 1 found a structure made of rubber, hanging from sky-hooks, they would merely have been intrigued. But finding Earthlike pyramids is the epitome of unexpectedness. Or picture adventurers breaking through jungle in darkest Africa and suddenly coming upon—an office building!

And so the enigma of pyramids on Mars, on Venus, and on Earth continues. The solution to this cosmic puzzle is a dramatic one, and Gordon A. Giles poses the question in **VIA PYRAMID**, the second in the Venusian series. Here's an interesting discussion

on the problem from the author:

In this second of the Venus series, I tried valiantly to get my men off Venus, but misfortune came to them, as it is likely to in any primeval setting. In mulling over the plot for this story, it occurred to me that the greatest mystery Venus had to offer, above its clockwork rains, deadly molds, strange life-forms, etc., was—an Earthly pyramid!

The surprise of such a phenomenon was really exploited in the first of this series. But here in the second it is carried through more fully. And the pyramid now looms, in all the "Via" stories, as a symbol of a past history of the Solar System. When 19th century archeologists and paleontologists first began poking around for bones and relics, they had little inkling what a mighty panorama of the past they were opening up. Through them, mankind was suddenly aware that the few thousands of years of recorded history—looming so important to us—were the tiniest fraction of a far grander, fuller history of evolution.

Thus, these Venus explorers, like those archeologists, are slowly prying open the breathtaking vista of a history of the planets. They begin to feel something of the stupendous sweep of events prior to the first dim signs of civilization on Earth, Mars, Venus, Earth, and possibly Mercury and Jupiter have pyramids on them. What mysterious interplanetary event do they commemorate?

But they can't know the answer in one revealing flash. Archeologists pieced together their stirring account through a century and more of patient work. The first interplanetary explorers, assuming they find other civilizations on other worlds, will only be able to lay the groundwork for some later "Darwin" of interplanetary evolution to reveal the true story. That is part of the realistic framework I've tried to build these "Via" stories around.

(Editor's Note: "Via Sun," the last in this series, coming soon!)

LIFE WITHOUT END

We all must die some day. Science, miraculous science, is slowly lengthening our longevity. Future man will live longer than the physical weakling of today. And perhaps some day test-tube magic, combined with biological wizardry, will achieve an elixir of life. Man will be immortal!

Want to live forever? The prospect sounds fascinating. But make your decision *after* you read Frederic Arnold Kummer, Jr.'s novelet of immortality, **REVOLT AGAINST LIFE**.

REVOLT AGAINST LIFE was written and sold in the spring of 1938. I want to make that fact clear since a posthumous work of the immortal Weinbaum, dealing with the same subject, appeared during this year of 1939 and I would not seem a second Prometheus, stealing the flame of the gods. Beyond the basic question of immortality, however, the two yarns differ greatly. **REVOLT AGAINST LIFE** was inspired by, of all things, a dairy!

It so happens that in the course of my regular evening walks with my dog I pass the testing laboratory of one of Baltimore's biggest dairies. And through chatting with the testing chemists, who slip out on warm spring evenings for a cigarette and breath of air, I learned that the bacteria in milk is destroyed by high frequency sound waves. That started me thinking.

Suppose germs, colloidal particles of toxic poisons could be similarly broken up, destroyed. There would be nothing, as proven by Carrel's chicken heart, to prevent human life from living indefinitely. That was the beginning of **REVOLT AGAINST LIFE**. As I thought the subject over, however, it began to dawn upon me that such an apparent

(Concluded on page 124)

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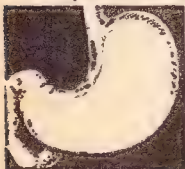
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(Concluded from page 123)

blessing would in reality be a curse. Overpopulation, starvation, no progress, the end of religion, young people doomed never to find jobs, since death made no place for them. Perhaps the saddest of all would be the absence of children. A strange, mad, regimented world it would be.

And when people had grown tired of life, of immortality, of eternal stasis, there would be, I am sure, a revolt against life. Life without end, supposedly the greatest gift possible to bestow, and the world clamors for its end! Yet, humanly, they insist that the abandonment of immortality be universal, that a chosen few do not keep the secret, live forever. The return to normal life span must, the people insist, be complete, with no exceptions. But the group of men in power, with an eternity of luxury and pleasure ahead, refused. This struggle is the story of **REVOLT AGAINST LIFE**. Hope you like it.

SCIENCE QUESTIONS AND ANSWERS

(Continued from Page 77)

mere 20 miles an hour. More statistics on bird flights in an early issue, if readers are interested.—Ed.

SHOOTING STARS

We read reports of the terrific speeds of shooting stars. I've seen meteors blaze through the atmosphere, but they're gone before I can blink. How, in such a few seconds, can astronomers calculate the actual speeds?—B. G. D., Chicago, Ill.

You can't lick astronomers! These amazingly resourceful scientists have a unique method all their own for gauging the speed of flashing meteors. They employ the use of a "meteor speedometer"—which is really two cameras, each attached to a telescope, but separated from each other by quite a distance.

Astronomers desiring to test the speed of a meteor during the few seconds when they blaze out against the friction of the stratosphere have to work fast. Two of the "meteor cameras" are trained at the same point in space, some fifty miles above the Earth's surface—but the cameras are at least twenty miles apart!

Each of the cameras is attached to a telescope. The main feature of the "speedometer" is a set of fan blades revolving in front of the camera lens interrupting the scene in its range twenty times per second. When a meteor flashes down in front of the lens, its trail is cut twenty times for every second that it is visible through the telescope's view, and measurement of the artificially produced segments in the trail provide a precise indication of velocity. The great distance between the two observing cameras is necessary to give a long enough "base" for geometric computations from the photographs of the position and movement of the bodies.—Ed.

COMETS

Comets, beyond doubt, are the most romantic of all celestial phenomena. How many comets are known to astronomers, and are they all members of our Solar System? —C. B., San Francisco, Calif.

Interest in comets has always been great, due to their awe-inspiring effect. Nearly 1,000 comets have been seen, of which about 400 appeared before the invention of the telescope and must therefore have been very

(Concluded on page 127)

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Have a number of I.R.E. Proceedings from 1925 to 1934. Will swap for radio parts, recording equipment. Will send a list to those interested. Edward L. Schiavone, 3410—13th Street, N.W., Washington, D. C.

Will swap surplus stamps for same amount of yours. Send to J. Banoa, 1057 Washington Avenue, Atlanta, Ga.

Wanted: Used sun films and 8mm movie equipment. Have typewriter, tools, brief case, stamps and many other things. Robert I. Davidson, Willow Avenue, Firthcliffe, N. Y.

I have about 1500 bulk precancel stamps, several odd Indian head cents which I will trade for the following Lincoln cents: 1905 S mint, 1909 VDB S mint, 1922 no mint mark, 1931 S mint, 1937 S mint or Indian head cents as follows: 1908 S, 1909 S and all others previous to 1880. Other articles will receive consideration. Al. Cramer, 1315 E. 10th Street, Indianapolis, Ind.

Wanted: stamp collectors in foreign countries to trade their stamps for U. S. stamps. Jack Rose, 2141 Union Street, Brooklyn, N. Y.

Will swap my stamps for? Write and let me know what you have. D. L. Evans, 119 East 2nd Street, Plainfield, N. J.

Have Canal Zone and Philippines. occupations, clipper and zeppelin covers. Want mint U. S. preferably, blocks and singles. Leonard A. Sharratt, 1989 Grassmere Terrace, Far Rockaway, N. Y.

Postmarks, post cards, matchcovers, and other materials to trade for old transmitting tubes, license plates. Carl Roman, 354 Dakota Street, Paterson, N. J.

Swap photography course, Indian relics, mink trapping methods, photos for roll film camera with fast lens. Make offers. Jesse Wells, Rock Island, Okla.

Will exchange my collection of 500 match folders, 5 sizes for stamp collection, guitar or? Richard Waits, Ballard Avenue, DeQueen, Ark.

Have medium size telescope as good as new to swap for something of equal value. Send list. L. D. Massey, Oakdale, Tenn.

Want achromatic telescope objective over 25" efl, parabolic telescope speculum 48" fl. Have new micrometric speedflash, photoelectric meter, 425X microscope, slides, re-agents. Wilbur J. Widmer, 679 Park Avenue, West New York, N. J.

I'll swap beautiful shell fossils for hobby lore. What have you? Trades only. C. W. Von Ende, 3506 Vincent North, Minneapolis, Minn.

Will exchange scout uniform, 60 power telescope, courses on hypnotism and ventriloquism for barbells, dumbbells, typewriter or? Henry Rutherford, 211 W. Madison Street, Troy, Ala.

Have tube light and neon. Pictures of prehistory jiu-jitsu stamps, toy motors. Almost anything. All letters answered. What have you to offer me? Jack Riggs, 1620 Chestnut Street, Berkeley, Calif.

Chemist will develop or furnish formula or processes. Fine grain film development and enlarging. What will you give? J. Smith, 63½ Frost Avenue, Frostburg, Md.

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EVERY MONTH

SCIENCE QUESTIONS AND ANSWERS

(Concluded from page 124)

bright. To the eye they are seldom visible more than a few weeks, but the telescope may follow them for years.

Comets are almost all dwellers of the Solar System and follow orbits about the sun as the Earth does. However, most of these orbits are very greatly elongated away from the sun.

After comets leave the sun's neighborhood and tread their way among the planets, they are apt to be influenced by planetary attraction which changes their orbits and sometimes makes them parabolic or hyperbolic instead of elliptical. In such cases they shoot away into space and never return.

Comets are believed composed of swarms of meteoric particles kept together by their own gravitational attraction.

As the swarm approaches the sun and becomes warmed by its rays, the gases enclosed in the particles ooze out and are presently repelled by the pressure of sunlight to form the tail. Partly by reflected sunlight, but mainly by the peculiar phenomenon luminescence, the comet glows brighter and brighter till in its very eccentric orbit it comes nearest the sun. Then on the return journey which may take it a billion miles away or even out into space never to return, the brightness fades rapidly to nothing.—Ed.

Planet Revolutions

How can we tell the number of days in another world's year? That's a trick most science fiction writers seem to go in for rather regularly.—M. M., Long Island, N. Y.

If we knew how long a planet takes to go once around the sun, we know the length of its year. Then, if we can watch the planet, and see how long it takes to spin around once on itself, we know the length of its day. Divide the length of the year by the length of the day, and we have the number of days in the year. But though that is easy in some cases, in others it is impossible, and so we cannot yet tell the number of days in a year of every planet.

The trouble is that, though we know how long the planet takes to go around the sun, in some cases—as in the case of Pluto—the planet is so far away that we cannot make out any of the features of its face, and therefore cannot tell at what rate it spins, or even that it spins at all, and we do not know the length of its day, though we know the length of its year.—Ed.

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ANSWERS TO SCIENCE QUIZ

(See pages 40-41)

POSITIVE OR NEGATIVE

1. False. It never rises more than two hours before the sun.
2. True.
3. False. It is always less than unity.
4. True.
5. False. In the red blood corpuscles.
6. True.
7. True.
8. True.
9. True.
10. True.
11. True.
12. False. Both receive the same amount of heat.
13. True.
14. False.
15. False.
16. True.
17. True.
18. True.
19. True.
20. True.

TAKE A LETTER

1. a
2. b
3. c
4. c
5. b
6. d
7. d
8. a
9. b
10. a

CAUSE AND EFFECT

10, 9, 2, 3, 7, 6, 1, 4, 8, 5.

SHADOW AND SUBSTANCE

umbra, penumbra, full, new, 5, 16, 11.

CALLING DOCTOR QUIZ

1. germ.
5. malaria.
9. pneumonia.
2. fever.
6. tetanus.
10. diphtheria.
3. measles.
7. antitoxin.
11. inflammation.
4. vaccine.
8. infection.
12. tuberculosis.

NEXT MONTH

THE LIGHTNING MEN

A Novelet of Earth's Exiles

By **JOHN COLEMAN BURROUGHS**
and **HULBERT BURROUGHS**

SCIENTIBOOK REVIEW

THE HOPKINS MANUSCRIPT, by R. C. Sheriff. Published by MacMillan, 1939, at \$2.50.

LIKE "The Invisible Man," "The World Below," and "To Walk the Night," "The Hopkins Manuscript" is first an excellent novel and second a good science-fiction story. Written by the author of "Journey's End," it provides a welcome relief from run-of-the-mill, formula fantasies, comparing favorably with the early H. G. Wells classics.

Purporting to be a record unearthed by an exploring expedition searching for remnants of civilization in an England that became a wilderness centuries before, the story tells of the near-destruction of Earth when the Moon returned to its parent planet.

The narrator, despite his pompous superficiality, is a sympathetic and likable Britisher who looks with horror upon the forthcoming catastrophe because it will mean the end of his hobby, poultry-breeding. As a member of the Royal Lunar Society, he is one of the first to learn that the Moon is steadily approaching the Earth.

Anxiously he watches man's pitiable preparations: the construction of great underground shelters, which do, in fact, save a remnant of the race when tornado, earthquake, and flood herald the Moon's advent.

Strange, heartbreaking, and completely plausible are human reactions to their approaching doom: the mobs that loot London, the innkeeper who forswears liquor, the old woman who regrets that she will have no funeral, and who is comforted by the prospect of dying in a subterranean shelter with the local Vicar.

And bitterly ironic is the end of the book, when man survives only to commit suicide by indulging in international warfare over the possession of the Moon's mineral treasures.

Good scenes: Hopkins trimming his hedges while waiting for doom; the scene in the underground shelter when a flood breaks through a limestone fault; the windows of Hopkins' home bursting outward when the air-blanket is whipped away from the Earth; the horrible final picture of starving oldsters in London getting intermittent reports of Europe's armies fighting and dying far away.

Put "The Hopkins Manuscript" on your "Must" list.

—H. K.

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20x4.50-21	\$2.35	\$1.00	30x4.50-31	\$2.55	30x4.50-31	\$2.55	30x4.50-31	\$2.55
20x4.50-21	\$2.35	\$1.00	30x4.50-31	\$2.55	30x4.50-31	\$2.55	30x4.50-31	\$2.55
20x4.75-19	\$2.55	\$1.25	30x4.75-19	\$2.75	30x4.75-19	\$2.75	30x4.75-19	\$2.75
20x4.75-20	\$2.75	\$1.25	30x4.75-20	\$2.95	30x4.75-20	\$2.95	30x4.75-20	\$2.95
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28x6.25-20	\$2.55	\$1.00	34x6.25-20	\$2.75	34x6.25-20	\$2.75	34x6.25-20	\$2.75
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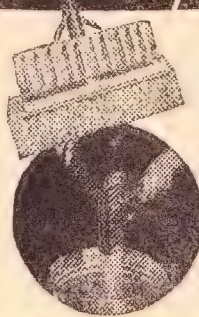
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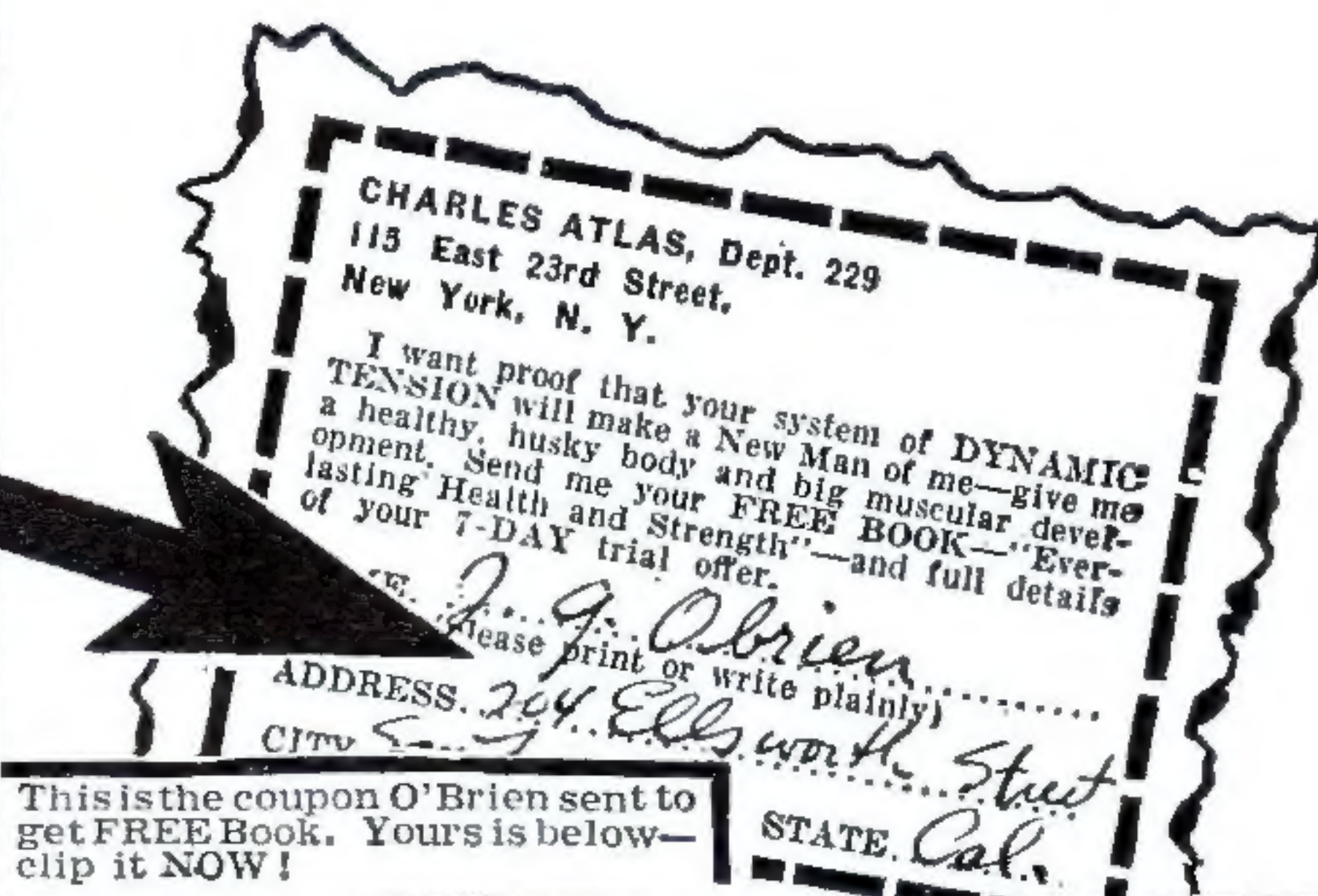
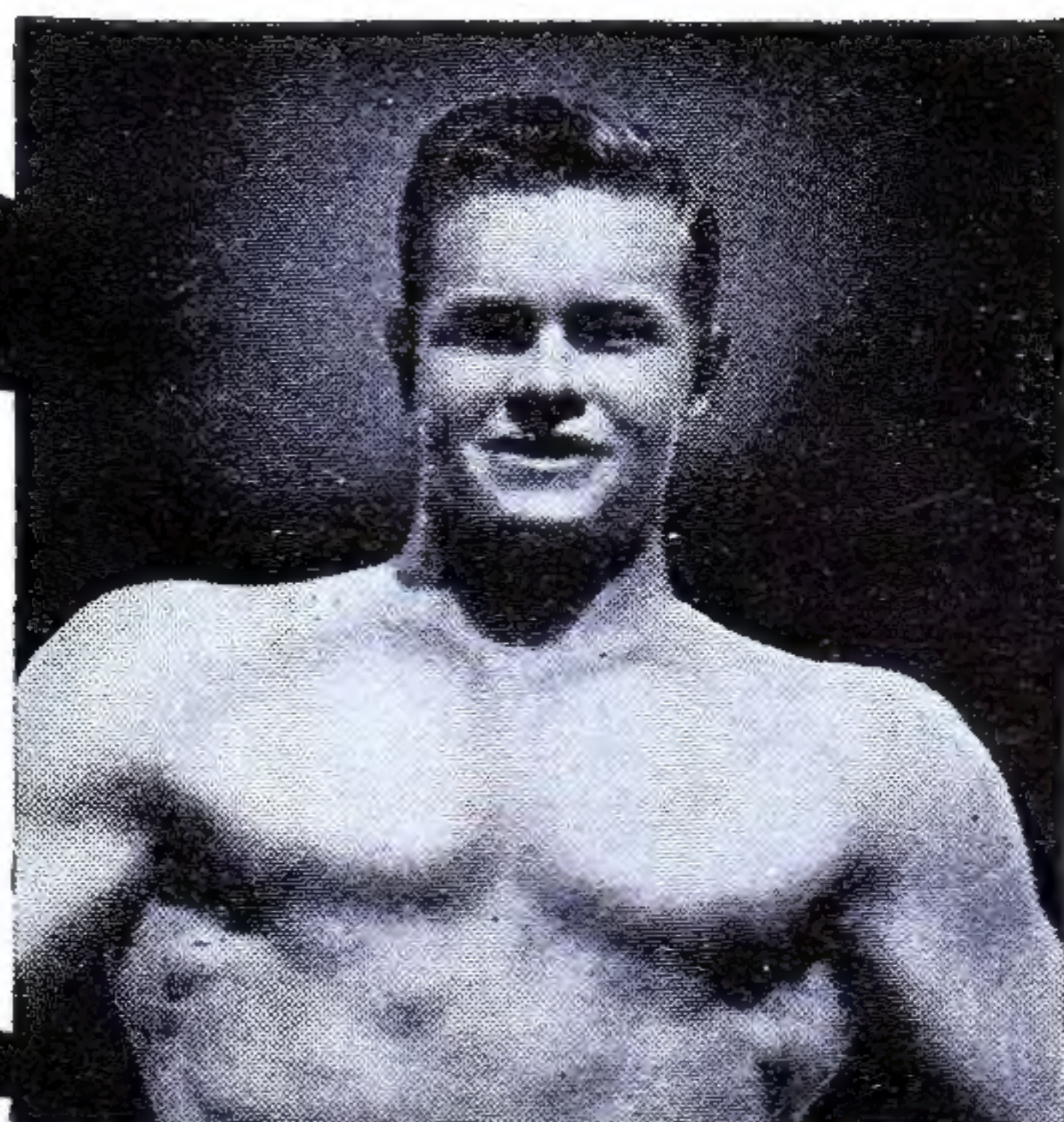
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